

PROJECT LICENSED PROFESSIONAL CERTIFICATIONS

That was

Tom Castor

May 26, 2023

As a Professional Engineer in direct responsible charge of developing this contract, I certify that all plans that contain my stamp have been developed under my supervision as a licensed professional.

As a Professional Engineer in direct responsible charge of developing this contract, I certify that all plans that contain my stamp have been developed under my supervision as a licensed professional.

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NOTES:

THIS PLAN SET WAS DEVELOPED ELECTRONICALLY UNDER THE DIRECT SUPERVISION OF THE
LICENSED PROFESSIONALS WHO HAVE AFFIXED THEIR SIGNATURE TO THIS PAGE.

THIS SHEET SERVES AS THE CERTIFICATION BY THE ABOVE LICENSED PROFESSIONALS OF ALL SHEETS IN THIS PLAN SET WHERE THEIR STAMPS AND SIGNATURES APPEAR.

FILE NAME: G:\Proj\SW\20X203 PD-TA-VA Trestle Repairs\PE\PE_PD\CAD\Contract Plans\Ad Ready\23x041CT01.00-CERTIFICATION-SHT.dwg										CT01.00	
PRINTED: 2:34:53 PM 5/26/2023		LAST PRINTED BY:				FED.AID PROJ.NO.					
SUBMITTAL DATE: 5/26/2023		SmithJ								SHEET	
DESIGNED BY: T. SMITH		5/26/2023						*- WA - **		3	
ENTERED BY: T. SMITH		5/26/2023						REGION NO. STATE		OF	
CHECKED BY: J. STRINGFIELD		5/26/2023						10 WASH		23	
MAR PROJ ENGR: T. CASTOR		5/26/2023						JOB NUMBER			
DGN ENGR MNGR: C. CHEN								20X203			
ASST SECRETARY: P. RUISTFELD								CONTRACT NO.		SHEETS	
		REVISION		DATE		BY		XF -			

STRUCTURAL PLANS ABBREVIATIONS

AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS	PL	PLATE
ACI	AMERICAN CONCRETE INSTITUTE	PCF	POUNDS PER CUBIC FOOT
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION	PSF	POUNDS PER SQUARE FOOT
API	AMERICAN PETROLEUM INSTITUTE	PSI	POUNDS PER SQUARE INCH
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	PLF	POUNDS PER LINEAR FOOT
AWS	AMERICAN WELDING SOCIETY	REQ'D	REQUIRED
ABS	AMERICAN BUREAU OF SHIPPING	R	RADIUS
ACP	ASPHALTIC CONCRETE PAVEMENT	SHT	SHEET
ALUM, AL	ALUMINUM	SIMM	SIMILAR
APPROX	APPROXIMATE	SS, SST	STAINLESS STEEL
BOTT	BOTTOM	STD	STANDARD
CL OR C	CENTER LINE	STIFF	STIFFENER
C TO C	CENTER TO CENTER	SYMM ABT	SYMMETRICAL ABOUT
CLR	CLEAR	THK	THICK
CONC	CONCRETE	TOS	TOP OF STEEL
CJ	CONSTRUCTION JOINT	TYP	TYPICAL
CJP	COMPLETE JOINT PENETRATION	UBC	UNIFORM BUILDING CODE
CTSK	COUNTERSUNK	WSDOT	WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
DIA, Ø	DIAMETER	WS	WASHINGTON STATE FERRIES
DWG	DRAWING		
EA	EACH		
EL	ELEVATION		
EXIST	EXISTING		
FCM	FRACTURE CRITICAL MEMBER		
FLGD	FLANGED		
FS	FAR SIDE		
FG	FINISHED GRADE		
FH	FLAT HEAD		
FT	FOOT		
GALV	GALVANIZED (HOT DIP)		
GA	GAUGE		
HSS	HOLLOW STRUCTURAL SECTION		
HORIZ	HORIZONTAL		
IBC	INTERNATIONAL BUILDING CODE		
IN	INCH		
ID	INSIDE DIAMETER		
LF	LINEAR FEET		
LRFD	LOAD AND RESISTANCE FACTOR DESIGN		
MB	MACHINE BOLT		
MAX	MAXIMUM		
MIN	MINIMUM		
MDL	MUDLINE		
N	NORTH, NORTHING		
NTS	NOT TO SCALE		
NO. OR #	NUMBER		
OC	ON CENTER		
OD	OUTSIDE DIAMETE		

STRUCTURAL PLANS SYMBOLS

EXIST STRUCTURE TO REMAINNEW STRUCTURE

UNITS:

UNITS SHOWN ARE IN FEET AND INCHES.
ELEVATIONS AND STATIONS ARE SHOWN
IN FEET, UNLESS OTHERWISE SPECIFIED.

A

S-6

LETTER IDENTIFIES SECTION OR VIEW.

IDENTIFIES SHEET NO ON WHICH SECTION,
VIEW OR DETAIL IS SHOWN OR TAKEN FROM.

1

✓

NUMBER IDENTIFIES DETAIL.

IDENTIFIES SECTION, VIEW OR DETAIL WHICH
IS TAKEN FROM OR SHOWN ON THE SAME SHEET.

GENERAL NOTES

DESIGN SPECIFICATIONS

DESIGN SPECIFICATIONS FOR VEHICULAR STRUCTURES OF THIS PROJECT ARE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATION NINTH EDITION.

DESIGN SPECIFICATIONS FOR NON-VEHICULAR STRUCTURES OF THIS PROJECT ARE IN ACCORDANCE WITH THE REQUIREMENTS OF THE 2018 INTERNATIONAL BUILDING CODE.

VEHICULAR STRUCTURES ARE DEFINED AS ANY STRUCTURES THAT ARE INFLUENCED BY THE EFFECTS OF VEHICULAR LIVE LOADS. THESE INCLUDE ALL ELEMENTS OF THE BULKHEAD, TRESTLE, BRIDGE SEAT, TRANSFER SPAN, HEADFRAME AND TOWERS OR LIFT CYLINDER SHAFTS.

LADDERS HAVE BEEN DESIGNED IN ACCORDANCE WITH WASHINGTON ADMINISTRATIVE CODE 296-56 AND 296-876.

GUARDRAILS AND RAILING THAT ARE INACCESSIBLE TO THE PUBLIC HAVE BEEN DESIGNED IN ACCORDANCE WITH WASHINGTON ADMINISTRATIVE CODE 296-24 AND 296-56.

CONSTRUCTION SPECIFICATIONS

ALL MATERIAL AND WORKMANSHIP SHOWN IN THE PLANS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION, CURRENT, AND ALL AMENDMENTS THERETO.

ALL DIMENSIONS AND ELEVATIONS ARE HORIZONTAL AND VERTICAL UNLESS OTHERWISE NOTED.

THE DIMENSIONS SHOWN ON THE CONTRACT PLANS FOR EXISTING STRUCTURES ARE BASED ON CONSTRUCTION RECORDS AND FIELD SURVEY DATA. RECORD DRAWINGS ARE NOT NECESSARILY COMPLETE NOR ACCURATE. FIELD CONDITIONS MAY VARY FROM THE RECORD DRAWINGS AND THE CONTRACT PLANS. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING FIELD CONDITIONS PRIOR TO SHOP FABRICATION. THE CONTRACTOR SHALL VERIFY ALL RELEVANT DIMENSIONS AND SURVEY DATA.

PLANS OF EXISTING STRUCTURES NOT INCLUDED IN THE CONTRACT PLANS ARE AVAILABLE FOR REVIEW AT THE OFFICE OF THE ENGINEER.

THE LOCATION OF ALL UTILITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO EXCAVATION OR DRILLING.

DESIGN TIDAL RANGES

TERMINAL	POINT DEFIANCE	TAHLEQUAH
MHHW	11.94	11.89
MHW	11.06	11.06
NAVD 88		
MLLW (DATUM)	0.00	

STRUCTURAL STEEL NOTES

STEEL PORTIONS OF ALL VEHICULAR STRUCTURES HAVE BEEN DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS EDITION WITH ALL INTERIMS.

STEEL PORTIONS OF ALL NON-VEHICULAR STRUCTURES HAVE BEEN DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF ANSI/AISC 360-16, SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS.

ROLLED SHAPES, PLATES AND BARS (VEHICULAR STRUCTURES) SHALL CONFORM TO THE REQUIREMENTS OF ASTM A 709 GRADE 50.
MIN. REQ'D. YIELD STRENGTH Fy = 50 KSI

ROLLED SHAPES(FOR NON-VEHICULAR STRUCTURES) SHALL CONFORM TO THE REQUIREMENTS OF ASTM A 992 GRADE 50 OR ASTM A 572 GRADE 50. PLATES AND BARS (FOR NON-VEHICULAR STRUCTURES) SHALL CONFORM TO THE REQUIREMENTS OF ASTM A 572 GRADE 50.
MIN. REQ'D YIELD STRENGTH Fy = 36 KSI

ANGLES (FOR NON-VEHICULAR STRUCTURES) SHALL CONFORM TO THE REQUIREMTNES OF ASTM A 36.
MIN. REQ'D. YIELD STRNENGTH Fy = 36 KSI

RECTANGULAR STRUCTURAL TUBING (HSS RECTANGULAR SECTIONS) SHALL CONFORM TO THE REQUIREMENTS OF ASTM A 500 GRADE B.
MIN. REQ'D. YIELD STRENGTH Fy = 46 KSI

ROUND STRUCTURAL TUBING (HSS ROUND SECTIONS) SHALL CONFORM TO THE REQUIREMENTS OF ASTM A 500 GRADE B.
MIN. REQ'D. YIELD STRENGTH Fy = 42 KSI

STAINLESS STEEL BARS AND SHAPES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A 276, TYPE 316 OR 316L (FOR WELDING).

HIGH STRENGTH BOLTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F 3125 GRADE A 325, TYPE 1 HEAVY HEX. NUTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A 563 GRADE DH HEAVY HEX. WASHERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F 436 TYPE 1.

STAINLESS STEEL BOLTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A 193, CLASS 2 GRADE B8M. STAINLESS STEEL NUTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A 194, GRADE 8M. STAINLESS STEEL WASHERS SHALL CONFORM TO THE REQUIREMENTS OF ANSI B18.22.1 TYPE 316.

ALL OTHER BOLTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A 307. NUTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A 563. WASHERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F 844.

THREADED ANCHOR RODS FOR RESIN BONDED ANCHORS AND ANCHOR BOLTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F 1554, GRADE 105.
MIN. REQ'D. YIELD STRENGTH Fy = 105 KSI

THREADED ANCHOR RODS FOR STAINLESS STEEL RESIN BONDED ANCHORS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F 593, TYPES 316 OR 316L.

LADDERS SHALL BE FABRICATED AS DESCRIBED BELOW UNLESS NOTED OTHERWISE.
RAILS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A 53 GRADE B
MIN. REQ'D. YIELD STRENGTH Fy = 35 KSI

RUNGS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A 706.

LADDERS SHALL BE PAINTED.

STEEL RAILING AND GUARDRAIL
RAILS AND POSTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A 53 GRADE B.
MIN. REQ'D. YIELD STRENGTH Fy = 35 KSI

EACH RAIL POST ASSEMBLY SHALL BE SHOP-WELDED IN AS LARGE A SECTION AS PRACTICAL TO AVOID MULTIPLE FIELD-WELDED CONNECTIONS.

ALL RAILING, SUPPORT POSTS AND THEIR WELDED CONNECTIONS SHALL BE PAINTED.

COATING

ALL STRUCTURAL STEEL IN THE FOLLOWING STRUCTURES SHALL BE COATED IN ACCORDANCE WITH THE PAINT SYSTEM SPECIFIED IN SECTION 6-07.3(9)A

ALL STRUCTURAL STEEL SPECIFIED TO BE GALVANIZED SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH AASHTO M 111.

ALL BOLTS, NUTS, AND WASHERS SPECIFIED TO BE GALVANIZED SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH AASHTO M 232 OR ASTM F2329.

HOT-DIP GALVANIZED SURFACES ALTERED OR DAMAGED BY CONSTRUCTION OR HANDLING SHALL BE REPAIRED IN ACCORDANCE WITH ASTM A 780.

FILE NAME: \\WSDOT.loc\WSF\Data\TermEng\Proj\SW\20X203 PD-TA-VA Trestle Repairs\PE\PE_PD\CAD\ContractPlans\Ad Ready\20x203_S01_01.dwg										 Washington State Department of Transportation WASHINGTON STATE FERRIES	SR160/SR163-POINT DEFIANCE /TAHLEQUAH FERRY TERMINALS- TRESTLE/WINGWALL PRESERVATION	S01.01	
PRINTED: 2:34:56 PM 5/26/2023	LAST PRINTED BY:												SHEET
SUBMITTAL DATE: 5/26/2023	SmithTJ												5
DESIGNED BY:	5/26/2023												OF
ENTERED BY: T. SMITH	5/26/2023											23	
CHECKED BY: T. CASTOR	5/26/2023											SHEETS	
MAR PROJ ENGR: T. CASTOR	5/26/2023												
DGN ENGR MNGR: C. CHEN													
ASST SECRETARY: P. RUBSTELLO			REVISION	DATE	BY	XE-							

GENERAL NOTES

WELDING

ALL WELDING OF STRUCTURAL STEEL (FOR VEHICULAR STRUCTURES, EXCLUDING HOLLOW STRUCTURAL SECTIONS) SHALL CONFORM TO AASHTO/AWS D1.5-2010 BRIDGE WELDING CODE. ALL "FCM" MEMERS SHALL BE FABRICATED IN ACCORDANCE WITH SECTION 12 OF AASHTO/AWS D1.5-2010.

SEE SECTION 6-03.3(25) FOR FURTHER INFORMATION ON WELDING AND SECTION 6-03.3(25)A AND THE SPECIAL PROVISIONS FOR FURTHER INFORMATION ON WELDING INSPECTION.

WHERE OTHER FILLER METALS AND PROCESSES HAVE NOT BEEN SPECIFIED, USE E70XX ELECTRODES AND THE SUBMERGED ARC WELDING METHOD.

ALL HOLLOW STRUCTURAL SECTIONS SHALL BE CAPPED AT THEIR ENDS WITH 1/4-INCH PLATES WITH SEAL WELD GROUND SMOOTH, UNLESS OTHERWISE NOTED.

ALL WELDED CONNECTIONS SHALL INCLUDE A SEAL WELD, UNLESS OTHERWISE NOTED.

COATING

ALL STRUCTURAL STEEL SHALL BE COATED IN ACCORDANCE WITH THE PAINT SYSTEM SPECIFIED IN SECTION 6-07.3(9)A

ALL STRUCTURAL STEEL SPECIFIED TO BE GALVANIZED SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH AASHTO M 111.

ALL BOLTS, NUTS, AND WASHERS SPECIFIED TO BE GALVANIZED SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH AASHTO M 232 OR ASTM F2329.

HOT-DIP GALVANIZED SURFACES ALTERED OR DAMAGED BY CONSTRUCTION OR HANDLING SHALL BE REPAIRED IN ACCORDANCE WITH ASTM A 780.

TIMBER NOTES

TIMBER PORTIONS OF ALL VEHICULAR STRUCTURES HAVE BEEN DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF AASHTO LRFD BRIDGE DESIGN SPECIFICATION NINTH EDITION.

ALL TIMBER AND LUMBER SHALL BE DOUGLAS FIR-LARCH HAVING THE TABULATED GRADE AND DESIGN VALUES INDICATED IN THE TABLE TITLED "TIMBER REQUIREMENTS" THIS DRAWING.

ALL HARDWARE SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH AASHTO M 232.

ALL BOLT HEADS, LAG SCREW HEADS AND NUTS BEARING ON TIMBER SHALL BE FITTED WITH MALLEABLE WASHERS, UNLESS NOTED OTHERWISE.

AFTER INSTALLATION OF THE NUT THE BOLT THREADS SHALL BE BURRED.

BOLT HOLES IN TIMER SHALL BE A MAXIMUM OF 1/16 INCH LARGER THAN THE HOT-DIP GALVANIZED BOLT OR THREADED ROD DIAMETER.

ALL CUT SURFACES, SPIKE AND BOLT HOLES, AND CONTACT SURFACES SHALL BE TREATED IN ACCORDANCE WITH SECTION 6-04.3(4) AND SUPPLEMENTED BY THE "TIMBER FIELD TREATMENT NOTES" THIS DRAWING, UNLESS NOTED OTHERWISE.

HOLES DRILLED IN TIMBER PILES SHALL BE ON THE CENTERLINE OF THE PILES, UNLESS NOTED OTHERWISE.

TIMBER-TO-TIMBER AND TIMBER-TO-STEEL CONNECTIONS SHALL HAVE NUTS TIGHTENED TO 100 FOOT-POUNDS TORQUE.

TIMBER FIELD TREATMENT NOTES

ALL TIMBER ABOVE SEA WATER LEVEL (EXCEPT CURBS, POSTS, RAILS AND HANDRAILS ABOVE TIMBER DECK)

ALL CUT SURFACES, SPIKE AND BOLT HOLES, AND CONTACT SURFACES SHALL BE TREATED WITH A LIBERAL APPLICATION OF COPPER NAPHTHENATE UNTIL VISIBLE EVIDENCE OF FURTHER PENETRATION HAS CEASED.

AFTER TREATING WITH COPPER NAPHTHENATE, ASPHALT ROOF CEMENT MEETING ASTM D4586 TYPE I SHALL BE APPLIED TO ALL CUT SURFACES, CONTACT SURFACES, AND PUMPED INTO SPIKE AND BOLT HOLES USING A GREASE GUN OR SIMILAR DEVICE.

ALL UNUSED SPIKE AND BOLT HOLES SHALL HAVE THREE INCH LONG TREATED HARDWOOD DOWELS INSTALLED. THE DOWELS SHALL BE TREATED BY SOAKING IN A CONTAINER OF COPPER NAPHTHENATE UNTIL VISIBLE EVIDENCE OF FURTHER PENETRATION HAS CEASED.

ALL TIMBER BELOW SEA WATER LEVEL


CARBOLINE KOP-COAT A-788 SPLASH ZONE MASTIC OR APPROVED EQUAL SHALL BE APPLIED TO ALL CUT SURFACES, CONTACT SURFACES, AND PUMPED INTO SPIKE AND BOLT HOLES USING A GREASE GUN OR SIMILAR DEVICE.

ALL UNUSED SPIKE AND BOLT HOLES SHALL HAVE THREE INCH LONG TREATED HARDWOOD DOWELS INSTALLED. THE DOWELS SHALL BE TREATED BY SOAKING IN A CONTAINER OF COPPER NAPHTHENATE UNTIL VISIBLE EVIDENCE OF FURTHER PENETRATION HAS CEASED.

TIMBER REQUIREMENTS

TIMBER REQUIREMENTS												
TIMBER USE	SPECIES	MODULUS OF ELASTICITY	BENDING		SHEAR		COMPRESSION		MILLING FINISH	AWPA USE CATEGORY	TREATMENT	RETENTION RATE (PCF)
	SIZE		Fbx (PSI)	Fby (PSI)	Fvx (PSI)	Fvy (PSI)	Fc (PSI)	Fc ⊥ (PSI)				
	GRADE											
TRESTLE BLOCKING, BRACING	DF-L	1,600,000	1600	NA	170	NA	1100	625	S1E	UC4C	ACZA	0.60
	BEAMS & STRINGERS											
	SELECT STRUCTURAL											

- NOTES:
- TABULATED DESIGN VALUES FOR TREATED ROUND PILES ARE FOR NORMAL LOAD DURATION AND WET SERVICE CONDITIONS.
 - TABULATED DESIGN VALUES FOR ALL OTHER ITEMS ARE FOR NORMAL LOAD DURATION AND DRY SERVICE CONDITIONS.
 - TABULATED DESIGN VALUES SHALL BE MULTIPLIED BY ALL APPLICABLE ADJUSTMENT FACTORS TO DETERMINE ALLOWABLE DESIGN VALUES.

FILE NAME: \\WSDOT.Ioc\WSF\Data\TermEng\Proj\SW\20X203 PD-TA-VA Trestle Repairs\PE\PE_PD\CAD\ContractPlans\Ad Ready\20x203_S01_02.dwg											
PRINTED: 2:34:58 PM 5/26/2023	LAST PRINTED BY:					FED.AID PROJ.NO.	 Washington State Department of Transportation WASHINGTON STATE FERRIES	SR160/SR163-POINT DEFIANCE /TAHLEQUAH FERRY TERMINALS-TRESTLE/WINGWALL PRESERVATION			S01.02
SUBMITTAL DATE: 5/26/2023	Smith TJ							SHEET 6 OF 23 SHEETS			
DESIGNED BY:	5/26/2023					*- WA- ***					
ENTERED BY: T. SMITH	5/26/2023					REGION NO. STATE					
CHECKED BY: T. CASTOR	5/26/2023					10 WASH					
MAR PROJ ENGR: T. CASTOR	5/26/2023					JOB NUMBER 20X203					
DGN ENGR MNGR: C. CHEN						CONTRACT NO. XE-					
ASST SECRETARY: P. RUBSTELLO		REVISION	DATE	BY			STRUCTURAL GENERAL NOTES II				

T.21N., R.2E.W.M.

REGION NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.
10	WASH.		

NOTE: For Harbor Lease Area see
DNR Plat reference no. SE 981
filed Sept. 21, 1979 and City of
Tacoma Lease dated April 10, 1980.

POINT DEFIANCE PARK
(CITY OF TACOMA)

Govt. Lot 2
Sec. 14

SE 1/4 SW 1/4
Sec. 14

Govt. Lot 3
Sec. 14

SCALE IN FEET
0 100 200

OUTER HARBOR LINE

INNER HARBOR LINE

slag filled area

MARINA

MATCH LINE A

MATCH LINE A

PIERCE COUNTY
SUNDRY SITE PLANS

POINT DEFIANCE FERRY TERMINAL

WASHINGTON STATE DEPARTMENT OF TRANSPORTATION

OLYMPIA, WASHINGTON

DUANE BERENTSON

SECRETARY



Robert B. Bickel
PROJECT DEVELOPMENT
ENGINEER

APPROVED OCTOBER 12, 1981
SHEET 13

FILE NAME: \\WSDOT.Loc\WSF\Data\TermEng\Proj\SW\20X203 PD-TA-VA Trestle Repairs\PE\PE_PD\AD\ContractPlans\Ad Ready\20x203_PD01.00.dwg

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SMITH TJ

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5/26/2023

ENTERED BY: T. SMITH

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MAR PROJ ENGR: T. CASTOR

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ASST SECRETARY: P. RUBSTELLO

REVISION

DATE

BY

XE-

FED. AID

PROJ. NO.

-WA-

REGION NO. STATE

10 WASH

JOB NUMBER

20X203

CONTRACT NO.



Washington State
Department of Transportation
WASHINGTON STATE FERRIES

SR160/SR163-POINT DEFIANCE
/TAHLEQUAH FERRY TERMINALS-
TRESTLE/WINGWALL PRESERVATION

POINT DEFIANCE SUNDRY SITE PLAN

PD01.00

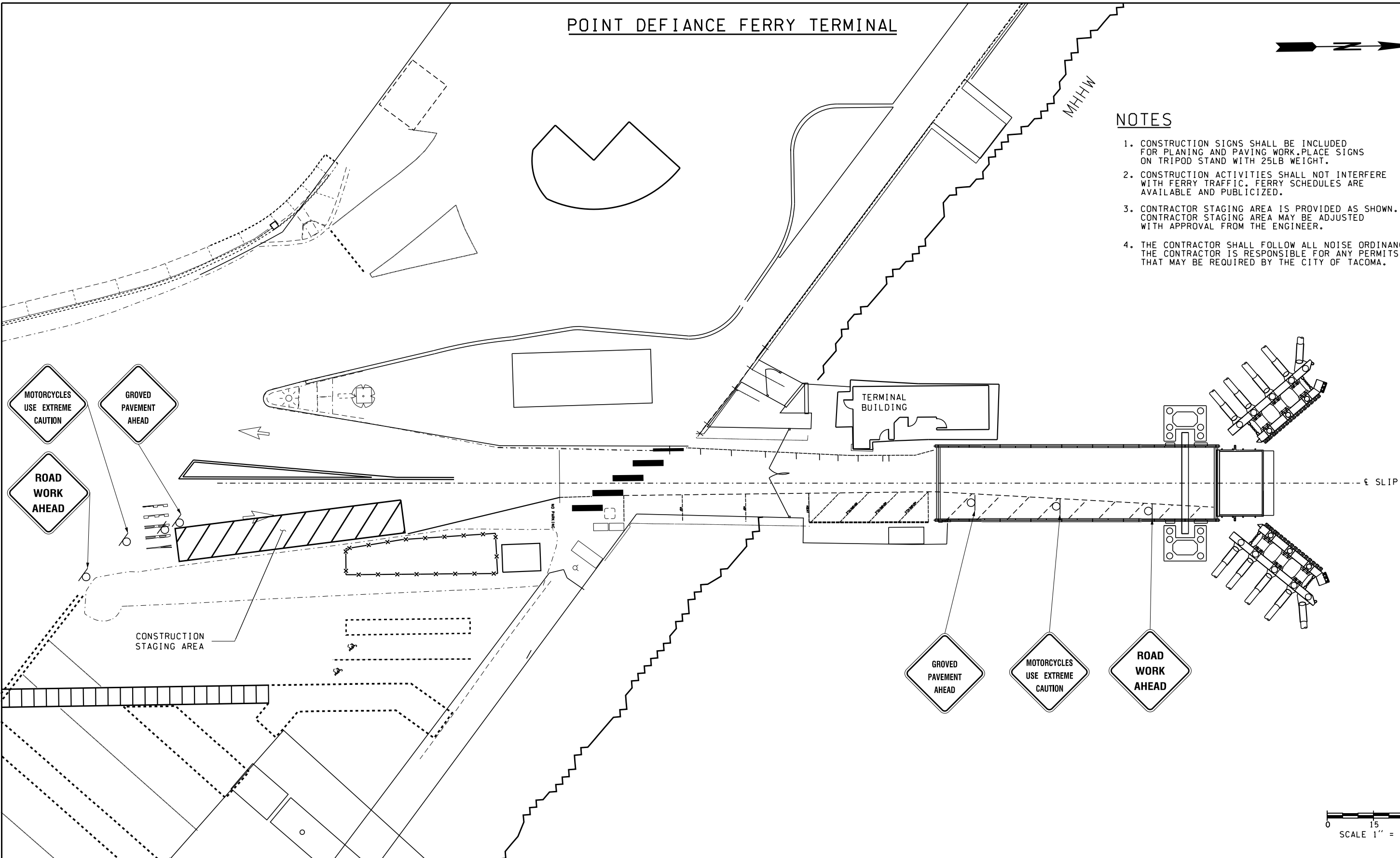
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23
SHEETS

POINT DEFIANCE FERRY TERMINAL



NOTES

1. CONSTRUCTION SIGNS SHALL BE INCLUDED FOR PLANING AND PAVING WORK. PLACE SIGNS ON TRIPOD STAND WITH 25LB WEIGHT.
2. CONSTRUCTION ACTIVITIES SHALL NOT INTERFERE WITH FERRY TRAFFIC. FERRY SCHEDULES ARE AVAILABLE AND PUBLICIZED.
3. CONTRACTOR STAGING AREA IS PROVIDED AS SHOWN. CONTRACTOR STAGING AREA MAY BE ADJUSTED WITH APPROVAL FROM THE ENGINEER.
4. THE CONTRACTOR SHALL FOLLOW ALL NOISE ORDINANCES. THE CONTRACTOR IS RESPONSIBLE FOR ANY PERMITS THAT MAY BE REQUIRED BY THE CITY OF TACOMA.



FILE NAME: \\WSDOT.Loc\WSF\Data\TermEng\Proj\SW\20X203 PD-TA-VA Trestle Repairs\PE\PE_PD\AD\ContractPlans\Ad Ready\20x203_PD02.00.dwg									
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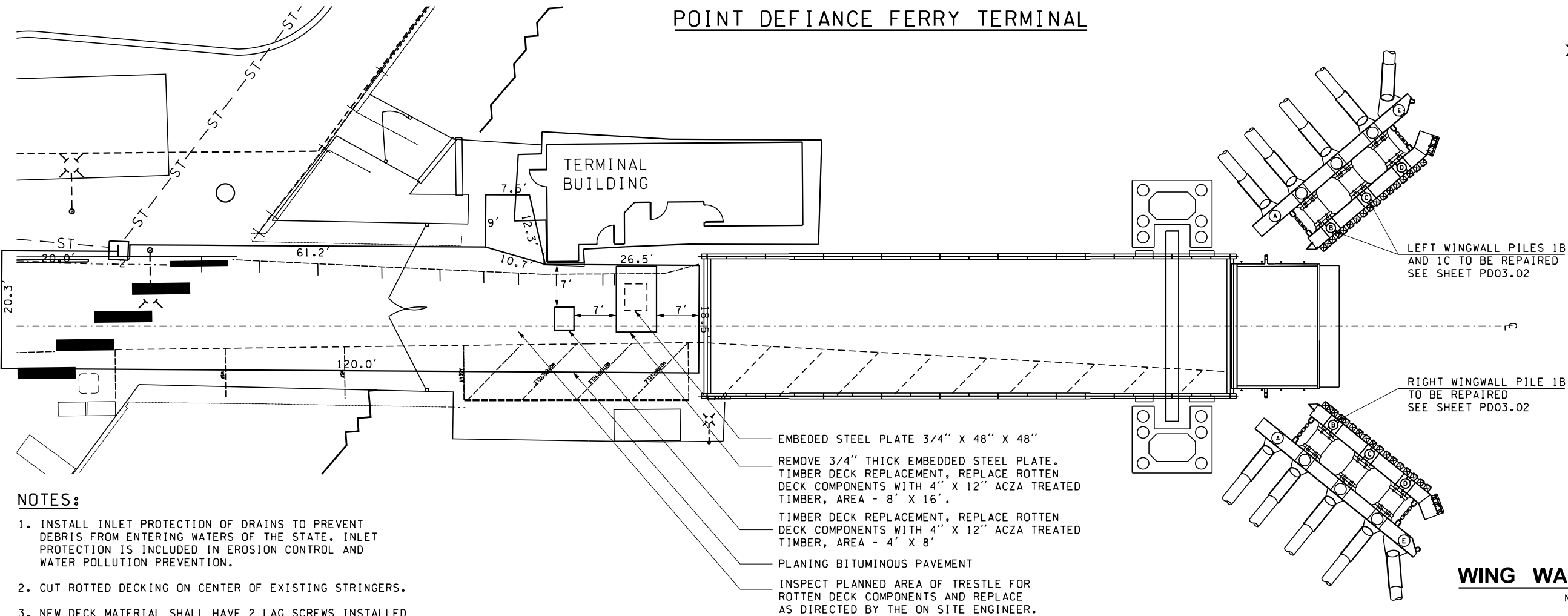
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*- WA- ***
REGION NO. STATE
10 WASH
JOB NUMBER
20X203
CONTRACT NO.



SR160/SR163-POINT DEFIANCE
/TAHLEQUAH FERRY TERMINALS-
TRESTLE/WINGWALL PRESERVATION
POINT DEFIANCE
CONSTRUCTION STAGING PLAN

PD02.00
SHEET
8
OF
23
SHEETS

POINT DEFIANCE FERRY TERMINAL

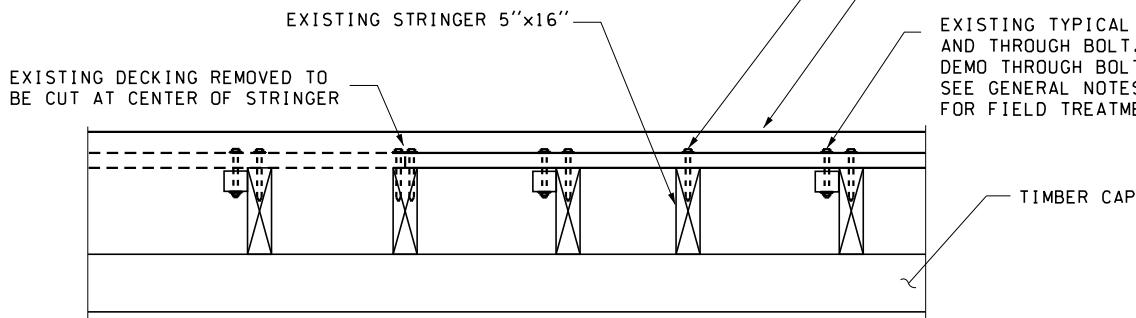


NOTES:

1. INSTALL INLET PROTECTION OF DRAINS TO PREVENT DEBRIS FROM ENTERING WATERS OF THE STATE. INLET PROTECTION IS INCLUDED IN EROSION CONTROL AND WATER POLLUTION PREVENTION.
2. CUT ROTTED DECKING ON CENTER OF EXISTING STRINGERS.
3. NEW DECK MATERIAL SHALL HAVE 2 LAG SCREWS INSTALLED EVERY 1'-6" INTO EXISTING STRINGERS.
4. THE CONTRACTOR SHALL SUPPLY 200 EXTRA LAG SCREWS BEYOND CONTRACT REQUIREMENTS FOR ANY EXTRA DECK REPAIR.
5. EXTRA TIMBER DECK REPAIR WILL BE PAID UNDER FORCE ACCOUNT TIMBER DECK REPAIR. THE CONTRACTING AGENCY MAY SUPPLY SOME MATERIALS BEYOND CONTRACT QUANTITIES.

- EMBEDDED STEEL PLATE 3/4" X 48" X 48"
- REMOVE 3/4" THICK EMBEDDED STEEL PLATE. TIMBER DECK REPLACEMENT, REPLACE ROTTEN DECK COMPONENTS WITH 4" X 12" ACZA TREATED TIMBER, AREA - 8' X 16'.
- TIMBER DECK REPLACEMENT, REPLACE ROTTEN DECK COMPONENTS WITH 4" X 12" ACZA TREATED TIMBER, AREA - 4' X 8'
- PLANING BITUMINOUS PAVEMENT
- INSPECT PLANNED AREA OF TRESTLE FOR ROTTEN DECK COMPONENTS AND REPLACE AS DIRECTED BY THE ON SITE ENGINEER.

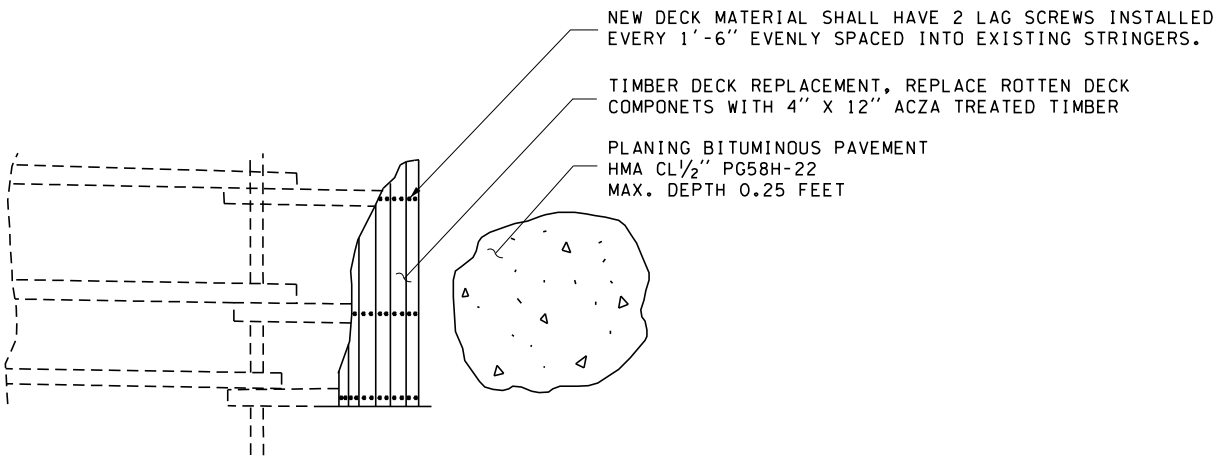
WING WALL PILE LAYOUT
NOT TO SCALE



TYPICAL STRINGER CONSTRUCTION
AT AREAS TO BE REPAIRED

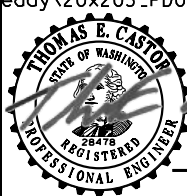
TRESTLE REPAIR DETAILS

NOT TO SCALE



TYPICAL STRINGER CONSTRUCTION
AT AREAS TO BE REPAIRED

FILE NAME: \\WSDOT.Ioc\WSF\Data\TermEng\Proj\SW\20X203 PD-TA-VA Trestle Repairs\PE\PE_PD\AD\ContractPlans\Ad Ready\20x203_PD02.01.dwg				
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SUBMITTAL DATE: 5/26/2023				*-WA-***
DESIGNED BY: T. SMITH	5/26/2023			REGION NO. STATE
ENTERED BY: T. SMITH	5/26/2023			10 WASH
CHECKED BY: J. STRINGFIELD	5/26/2023			JOB NUMBER
MAR PROJ ENGR: T. CASTOR	5/26/2023			20X203
DGN ENGR MNGR: C. CHEN				CONTRACT NO.
ASST SECRETARY: P. RUBSTELLO				
REVISION	DATE	BY		






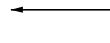

SR160/SR163-POINT DEFIANCE
/TAHLEQUAH FERRY TERMINALS-
TRESTLE/WINGWALL PRESERVATION
POINT DEFIANCE TIMBER DECK REPLACEMENT
DETAILS - WING WALL PILE LAYOUT

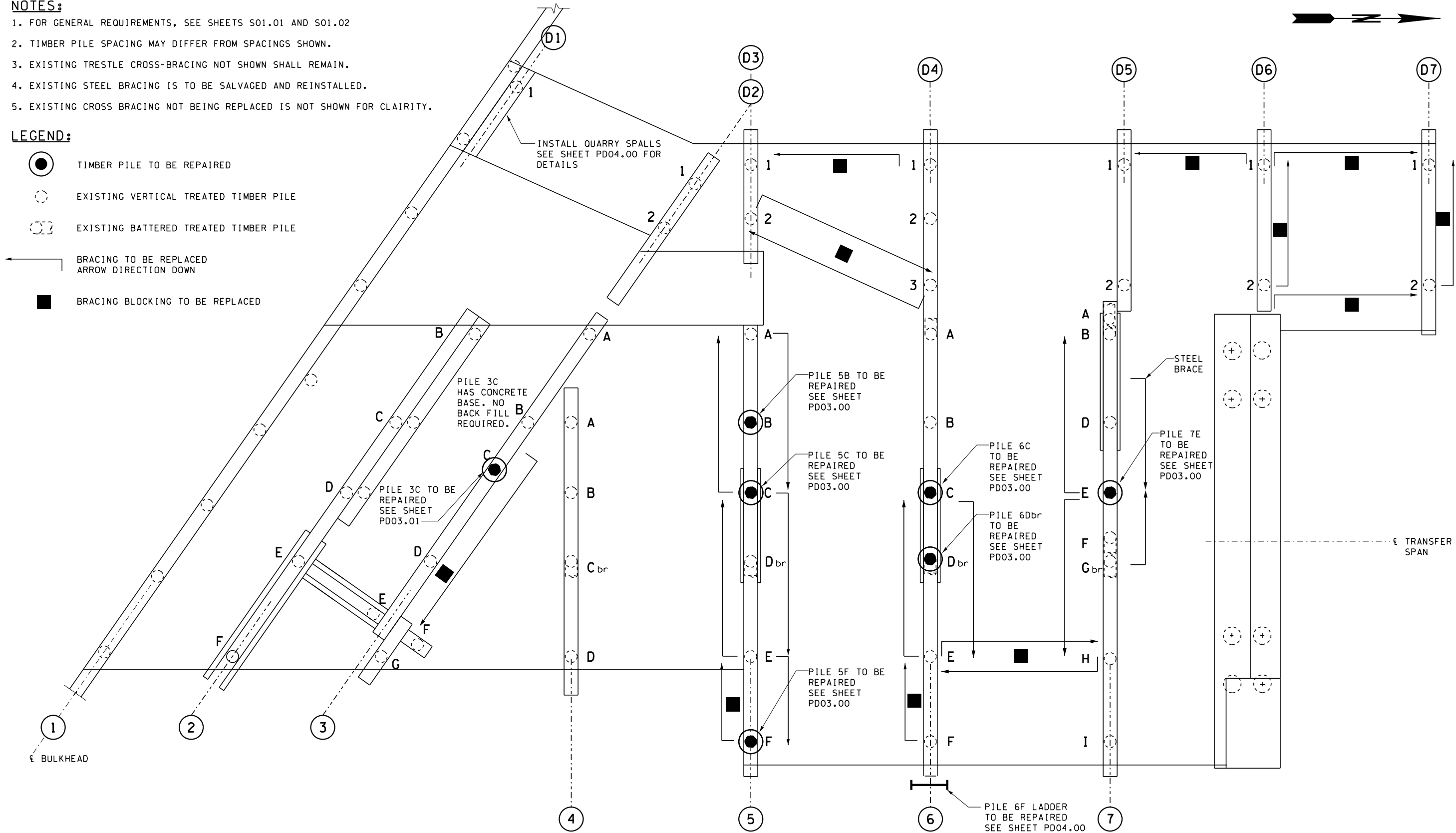
PD02.01
SHEET
9
OF
23
SHEETS

NOTES:

- 1. FOR GENERAL REQUIREMENTS, SEE SHEETS S01.01 AND S01.02
- 2. TIMBER PILE SPACING MAY DIFFER FROM SPACINGS SHOWN.
- 3. EXISTING TRESTLE CROSS-BRACING NOT SHOWN SHALL REMAIN.
- 4. EXISTING STEEL BRACING IS TO BE SALVAGED AND REINSTALLED.
- 5. EXISTING CROSS BRACING NOT BEING REPLACED IS NOT SHOWN FOR CLAIRITY.

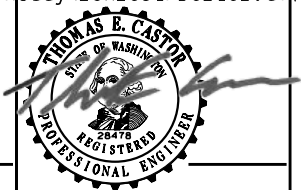
LEGEND:

-  TIMBER PILE TO BE REPAIRED
-  EXISTING VERTICAL TREATED TIMBER PILE
-  EXISTING BATTERED TREATED TIMBER PILE
-  BRACING TO BE REPLACED
ARROW DIRECTION DOWN
-  BRACING BLOCKING TO BE REPLACED



FILE NAME: \\WSDOT\loc\WSF\Data\TermEng\Proj\SW\20X203 PD-TA-VA Trestle Repairs\PE\PE_PD\AD\ContractPlans\Ad Ready\20x203_PD02.02.dwg									
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REGION NO. STATE
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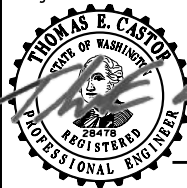
SR160/SR163-POINT DEFIANCE /TAHLEQUAH FERRY TERMINALS- TRESTLE/WINGWALL PRESERVATION POINT DEFIANCE - TRESTLE PILE LAYOUT AND BRACING PLAN	PD02.02
	SHEET
	10
	OF
	23
	SHEETS

- NOTES:
- FOR GENERAL REQUIREMENTS, SEE S01 DRAWING SERIES. FOR FIELD TREATMENT OF CUT SURFACES, SPIKE AND BOLT HOLES, AND CONTACT SURFACES, SEE S01.01
 - IT IS THE CONTRACTORS OPTION TO USE STEEL OR TIMBER CROSS-BRACING. FOR NEW CROSS-BRACING AND BLOCKING PLAN LOCATIONS, SEE SHEET PD02.01. THE CONTRACTING AGENCY WILL SUPPLY BLOCKING ON SITE.
 - ALL NEW CROSS-BRACING, BLOCKING AND CONNECTIONS SHALL MATCH THAT OF ORIGINAL LOCATIONS. SOME EXISTING CONNECTIONS MAY INCLUDE (2) BOLTS INTO THE PILE OR CAP. NEW CONNECTION SHALL ONLY INCLUDE (1) BOLT WHILE ALL REMAINING HOLES THROUGH TIMBER SHALL BE PLUGGED PER S01.02. ALL DIMENSIONS SHALL BE FIELD VERIFIED BY CONTRACTOR.
 - TRANSVERSE CROSS -BRACING NOT SHOWN FOR CLARITY.
 - ALL BRACING, LONGITUDINAL AND TRANSVERSE, SHALL BE FASTENED AT EACH PILE WITH ONE GALVINIZED 3/4"Ø FLAT HEAD BOLT MALLEABLE WASHER.
 - ESTIMATED LENGTHS OF NEW CROSS BRACING ARE AS FOLLOWS.
 - ALL CHANNEL STEEL CROSS BRACING REMOVED FOR PILE REPAIR SHALL BE RE- ATTACHED WITH NEW HARDWARE AFTER THE REPAIR IS COMPLETE.

POINT DEFIANCE CROSS BRACING LOCATIONS			
LOWER CONNECTION ELEV	PILE 1 LOWER	PILE 2 UPPER	LENGTH (FT)
7.0	BENT 3 PILE F	BENT 3 PILE C	25
2.0	BENT 5 PILE E	BENT 5 PILE F	25
2.0	BENT 5 PILE F	BENT 5 PILE E	25
2.0	BENT 5 PILE C	BENT 5 PILE E	25
2.0	BENT 5 PILE E	BENT 5 PILE C	25
2.0	BENT 5 PILE A	BENT 5 PILE C	25
2.0	BENT 5 PILE C	BENT 5 PILE A	25
1.0	BENT D3 PILE 2	BENT D4 PILE 3	25
1.0	BENT D4 PILE 3	BENT D3 PILE 2	25
1.0	BENT D3 PILE 1	BENT D4 PILE 1	25
0.0	BENT 6 PILE E	BENT 6 PILE F	20
0.0	BENT 6 PILE C	BENT 6 PILE E	25
0.0	BENT 6 PILE E	BENT 6 PILE C	25
0.0	BENT 6 PILE E	BENT 7 PILE H	25
0.0	BENT 7 PILE H	BENT 6 PILE E	25
0.0	BENT 7 PILE H	BENT 7 PILE E	25
0.0	BENT 7 PILE B	BENT 7 PILE E	SALVAGED STEEL
0.0	BENT 7 PILE E	BENT 7 PILE Gbr	20
0.0	BENT 7 PILE E	BENT 7	SALVAGED STEEL
0.0	BENT D5 PILE 1	BENT D6 PILE 1	20
0.0	BENT D6 PILE 1	BENT D6 PILE 2	20
0.0	BENT D7 PILE 1	BENT D6 PILE 1	20
0.0	BENT D7 PILE 2	BENT D6 PILE 2	20
0.0	BENT D7 PILE 1	BENT D7 PILE 2	20
INFORMATIONAL ESTIMATED LINEAR FEET OF CROSS BRACING			515

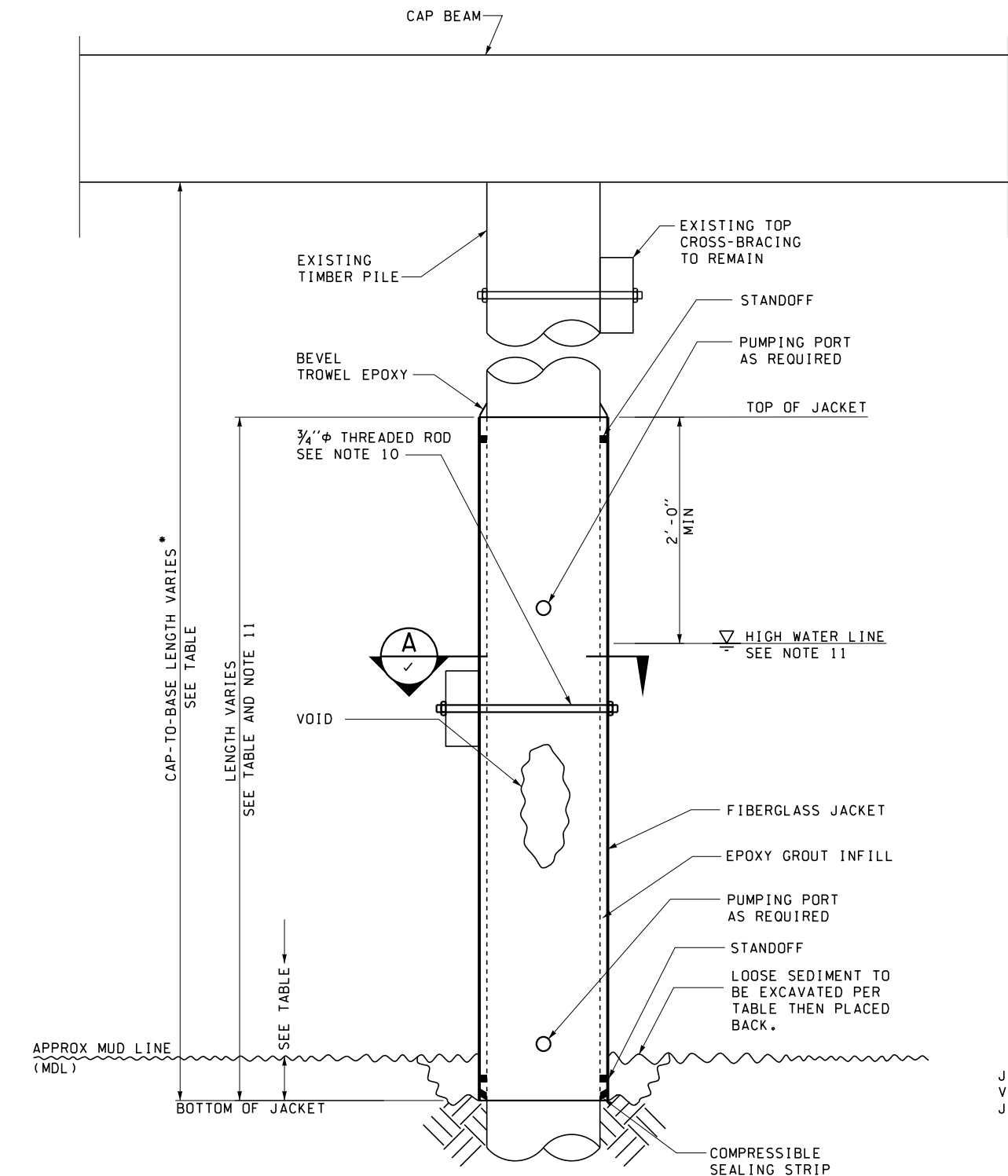
REFER TO SHEET PD02.02 FOR PLAN LOCATIONS

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	REVISION	DATE	BY						



SR160/SR163-POINT DEFIANCE /TAHLEQUAH FERRY TERMINALS- TRESTLE/WINGWALL PRESERVATION
POINT DEFIANCE TRESTLE CROSS-BRACING REPLACEMENT DETAILS

PD02.03
SHEET 11 OF 23 SHEETS

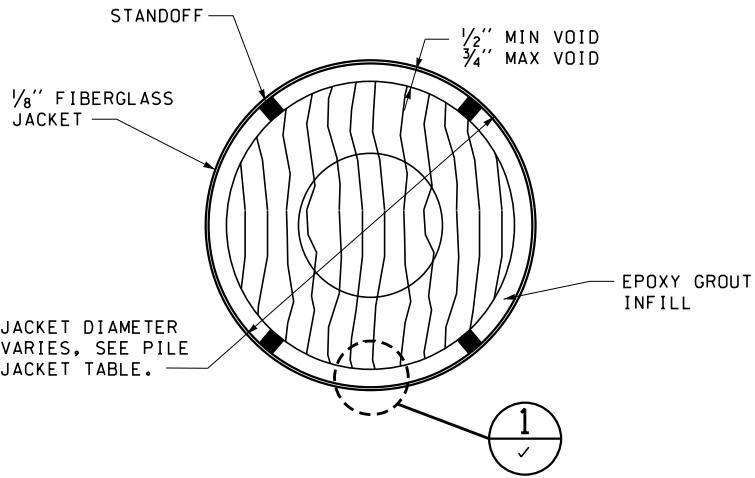


TIMBER PILE REPAIR DETAIL

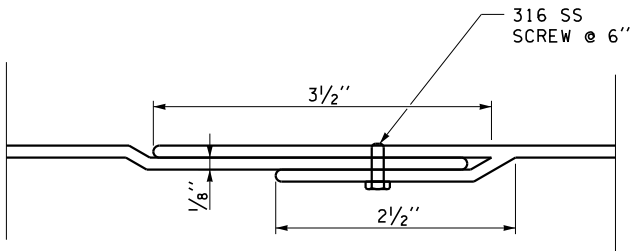
• LENGTH REFERS TO BOTTOM OF MAIN CAP OR SUB-CAP WHERE APPLICABLE. LENGTH REFERS TO VERTICAL DIMENSIONS ON ALL BATTERED PILES.

PILE JACKET TABLE					
PILE DESIGNATION	MUDLINE DIAMETER* (IN)	CAP-TO-MDL LENGTH (FT)	BOTTOM OF JACKET	TOP OF JACKET	MDL ELEV. (FT)
3C		SEE SHEET PD03.01			
5B	12.2	16.9	MDL - 1'	MDL + 5'	-3.5
5C	12.4	16.9	MDL - 1'	MDL + 10'	-4.3
5F	12.8	17.7	MDL	MDL + 6'	-4.5
6C	11.5	18.8	MDL - 2.5'	MDL + 6'	-5.3
6Dbr	14.5	17.7	MDL - 1'	MDL + 7'	-5.3
7E	11.8	20.7	MDL + 4'	MDL + 10'	-6.2

• PILE DIAMETER IS APPROXIMATE AND SHOULD BE FIELD VERIFIED BY CONTRACTOR.



A SECTION



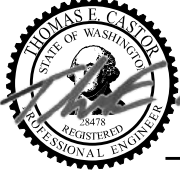
1 DETAIL

OPTIONAL SPLICE DETAIL

NOTES:

- FOR GENERAL REQUIREMENTS, SEE S01 DRAWING SERIES. FOR FIELD TREATMENT OF CUT SURFACES, SPIKE AND BOLT HOLES, AND CONTACT SURFACES, SEE S01.01 AND S01.02.
- FOR ADDITIONAL REQUIREMENTS, SEE SPECIAL PROVISION "TIMBER PILE REPAIR".
- FOR LOCATIONS OF TIMBER PILES TO BE REPAIRED, SEE TRESTLE PILE LAYOUT SHEETS.
- WHERE GROUND LINE SLOPES, EXCAVATION SHALL BE MEASURED FROM THE LOWEST ADJACENT GROUND LINE.
- THE CONTRACTOR SHALL CLEAN AND TREAT THE SURFACE OF THE EXISTING TIMBER PILE PRIOR TO THE INSTALLATION OF THE FIBERGLASS JACKET AND EPOXY GROUT PER SPECIAL PROVISIONS.
- THE CONTRACTOR SHALL TAKE STEPS NECESSARY TO PREVENT DEBRIS AND MATERIAL FROM ENTERING THE WATER WHILE CLEANING AND REPAIR PLACEMENT.
- THE CONTRACTOR SHALL SUBMIT FOR APPROVAL THE PROPOSED PILE JACKET SYSTEM. STANDOFF SPACERS SHALL BE PROVIDED TO ENSURE THE JACKET FORM IS CENTERED ON THE EXISTING PILES.
- ALL STEEL THREADED RODS, FASTENERS AND CONNECTIONS SHALL BE HOT-DIPPED GALVANIZED PER AASHTO M232.
- THE CONTRACTOR SHALL REMOVE AND REINSTALL ALL CROSS BRACING AT PILE REPLACEMENT LOCATIONS AS REQUIRED.
- AS REQUIRED FOR EXISTING PILES WITH EXISTING AND PROPOSED CROSS-BRACING THREADED ROD FOR EXISTING BOTTOM CROSS-BRACING SHALL BE INSTALLED THROUGH THE PILE AND PILE JACKET PRIOR TO POURING EPOXY GROUT.
- SPECIFIED PILE JACKET DETAILS BASED ON ROT LOCATIONS. GREATER HEIGHTS MAY BE REQUIRED BASED ON HIGH WATER LEVEL.
- TRANSVERSE CROSS-BRACING AND RIP-RAP NOT SHOWN FOR CLARITY.
- ADDITIONAL EXCAVATION MAY BE REQUIRED TO ACCOUNT FOR SEALING STRIP INSTALLATION.

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SR160/SR163-POINT DEFIANCE /TAHLEQUAH FERRY TERMINALS-TRESTLE/WINGWALL PRESERVATION
POINT DEFIANCE TIMBER TRESTLE PILE REPAIR DETAILS

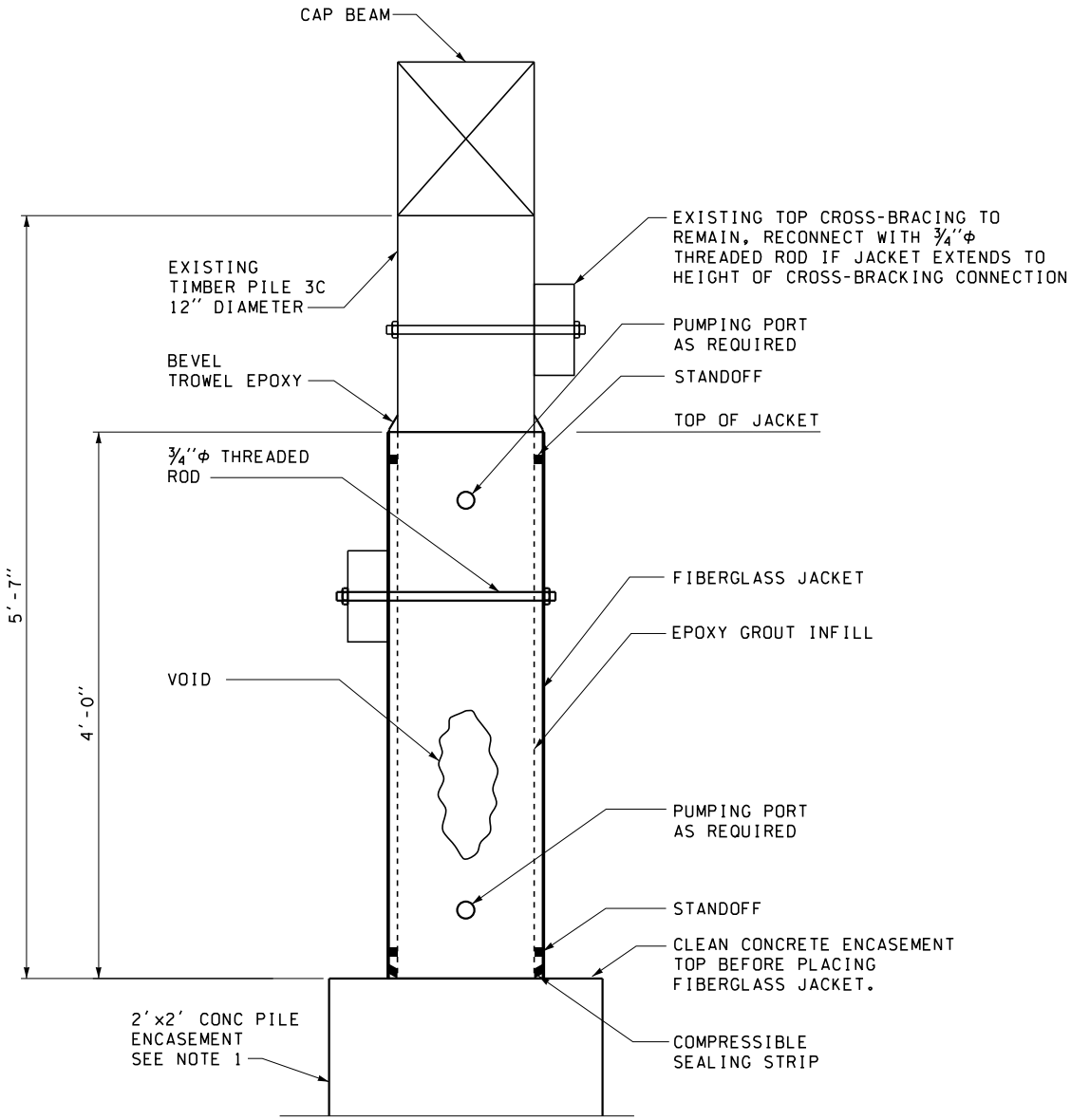
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SHEET
12
OF
23
SHEETS

Pile Location		Condition/Damage					Inspection Type	
Bent	Pile	% Area Remaining	Pile Type	RT Pile Dia. (in)	Elevation	Details/Remarks	Routine/ UW/ UWInt	Date
PILE INSPECTION DATA - Point Defiance Approach Trestle								
3	C	50	T	12	MDL + 3'	Square concrete encasement. 9" diameter rot pocket just above concrete repair at 7:00 (photo #74). Void measures 10" straight in 6" to the left at 45 deg. And 7" right at 45 deg.	UW/Interim	2/25/2021
5	B	25	T	12.2	MDL + 2'	5"(W) x 7"(H) opening at 12:00, 11" pen., 8" pen. 45° left, 11" pen. 15° right, 12" pen. 45° up (Photos UW-6 & UW-7) 1" dia. hole at 6:00 into the same void with 9" pen. 30° left.	UW/Interim	2/25/2021
5	C	75	T	12.4 11.4	MDL + 7' MDL + 2'	MBE 3"(W) x 5"(H) x 3"(D) cavity at 12:00 6" pen. 45° up (Photo UW-8) MBE 4"(W) x 12"(H) x 7"(D) cavity at 5:00 (Photo UW-9)	UW/Interim	2/25/2021
5	F	25	T	12.8	MDL + 3'	2" diam. 10:00 to 4:00 bolt hole with a 12" (w) cavity inside (Photos UW-11 and UW-12)	UW/Interim	2/25/2021
6	C	25	T	11.5	MDL + 1.5' MDL + 2'	Void behind a 12" (T) x 6" (W) opening that is 7.5" (W) and 11" deep at 3:00 (Photos UW-21 and UW-22) Void 4"(T) x 1.5"(W) x 5" pen. at 9:00 connects to the upper portion of the lower void (can see light when light shined in hole).	UW/Interim	2/25/2021
6	Dbr	50	T	14.5	MDL+1 to MDL+5 MDL+3	Check at 11:30 w/multiple MBE holes with up to 6" pen. MBE Void in check 11"(T) x 2"(W) x 10" pen. at 11:00 (Photos UW-14 and UW-15)	UW/Interim	2/25/2021
7	E	25	T	11.8	MDL + 7'	2" dia. hole at 6:00 cavity 10" to 11" dia. at 6:00 with 11" pen. (Photo UW-17)	UW/Interim	2/25/2021
PILE INSPECTION DATA - Point Defiance Left Wingwall								
1	B		SRP		ITZ - MDL MDL+3 MDL+1' to MDL+4' MDL to MDL+1'	Isolated coating failure. Thickness = 0.510"/0.395" in 2011. 9" corrosion crack open to 3" tall exposing the loose rock inside of the pile, no concrete was seen, on the back side of the pile (photos UW-9 and UW-12). 50% coating failure. Thickness = 0.130" bad area in 2015. Typical coating failure band 1'(T). Thickness 0.430" bad and 0.490 good.	UW	2/25/2021
1	C		SRP		ITZ MDL +3' MDL to MDL +6'	Coating failure on piles & weld seams in upper tidal and splash zone. 5" diameter hole due to corrosion in the steel with a 6" void in the concrete that can be seen inside (photos UW-10 and UW-13). 6'(T) band around entire pile with coating failure (Photo UW-3).	UW	2/25/2021
PILE INSPECTION DATA - Point Defiance Right Wingwall								
1	B		SRP		MDL +3' MDL	There is a large crack open to 3" that goes around all but 17" of the pile circumference. The offshore metal is bulging above the crack (photo UW-14). There is no concrete seen in the crack just river rock (photos UW-7, UW-8, and UW-15). Thickness = 0.485"/0.275" (small isolated area) in 2011.	UW	2/25/2021

POINT DEFIANCE INSPECTION INFORMATION

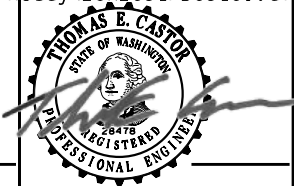
NOTES:

1. SEE PD03.00 FOR INFORMATION NOT SHOWN.
2. SPECIFIED PILE JACKET DATA IS BASED ON CORROSION LOCATIONS. GREATER HEIGHTS MAY BE ALLOWED BASED ON HIGH WATER LEVEL.



POINT DEFIANCE TIMBER PILE 3C REPAIR DETAIL
LOOKING SOUTH PARALLEL TO CAP BEAM

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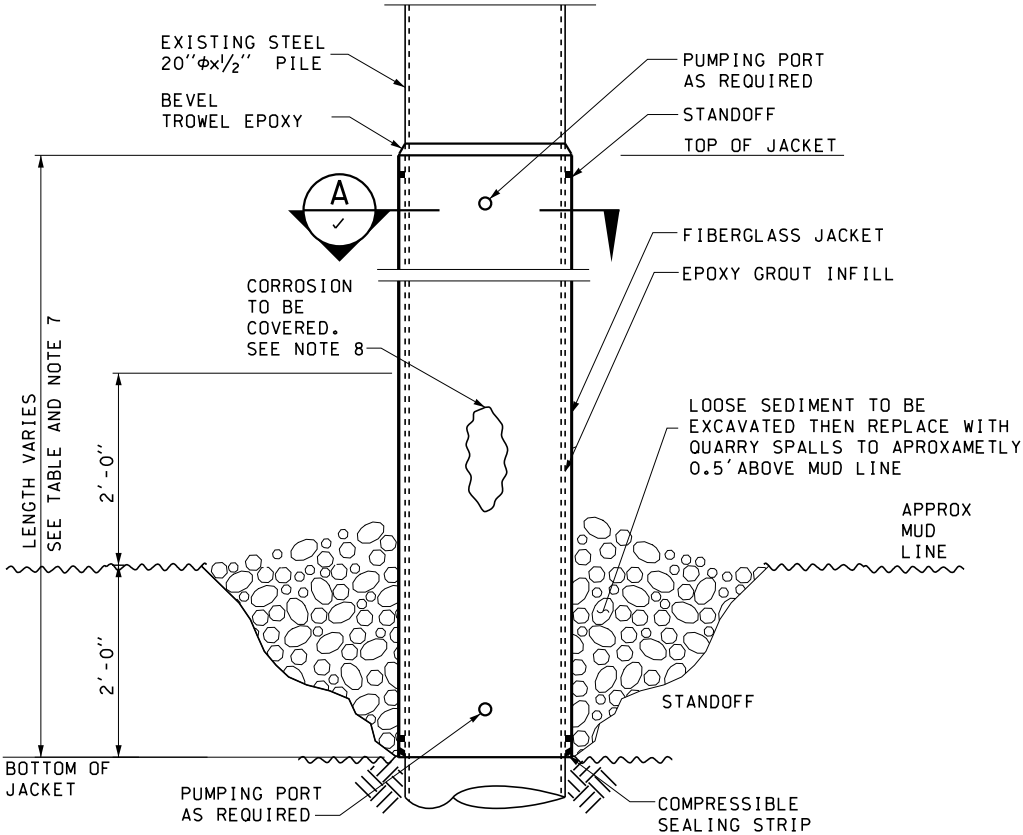
SR160/SR163-POINT DEFIANCE /TAHLEQUAH FERRY TERMINALS-TRESTLE/WINGWALL PRESERVATION
POINT DEFIANCE TIMBER TRESTLE PILE 3C REPAIR DETAILS

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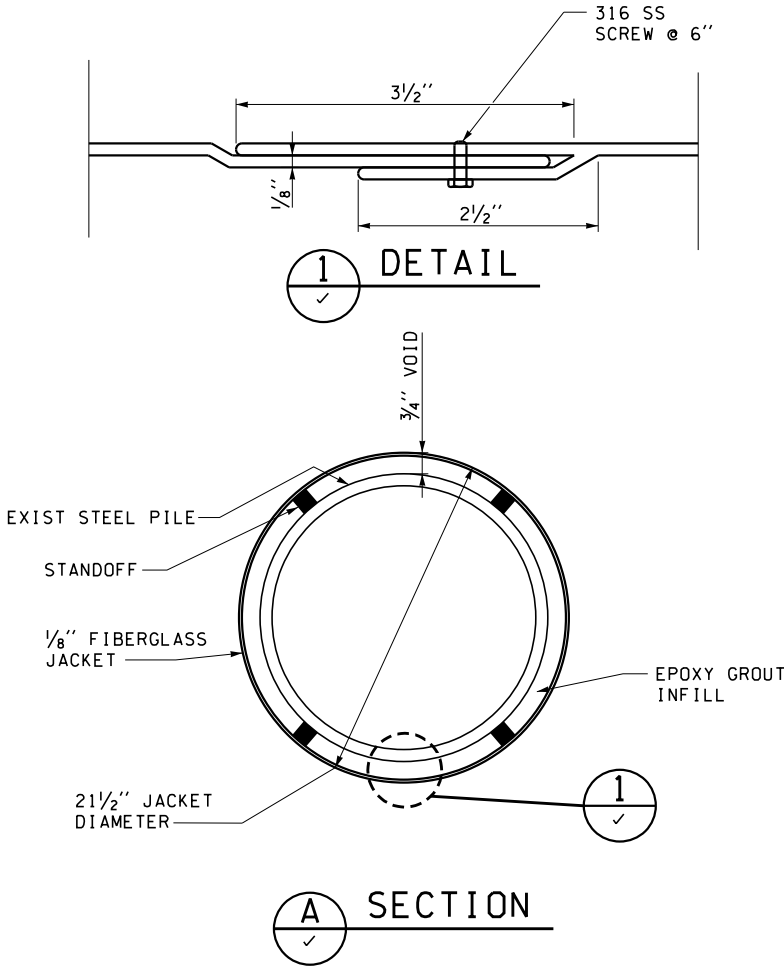
PILE JACKET TABLE					
WINGWALL	PILE	PILE	BOTTOM	TOP OF	MDL
L	DESIGNATION	DIAMETER (IN)	OF JACKET	JACKET	ELEV. (FT)
PT DEFIANCE					
LEFT	1B	20	MDL - 2'	MDL + 7'	-20
LEFT	1C	20	MDL - 2'	MDL + 9'	-20
RIGHT	1B	20	MDL - 2'	MDL + 6'	-17

NOTES:

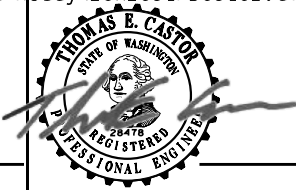
- FOR ADDITIONAL REQUIREMENTS, SEE SPECIAL PROVISION "STEEL PILE REPAIR"
- FOR LOCATION OF STEEL PILES TO BE REPAIRED SEE TRESTLE PILE LAYOUT SHEET PD02.01.
- WHERE GROUND LINE SLOPES, EXCAVATION SHALL BE MEASURED FROM THE LOWEST ADJACENT GROUND LINE.
- THE CONTRACTOR SHALL CLEAN AND TREAT THE SURFACE OF THE EXISTING STEEL PILE PRIOR TO THE INSTALLATION OF THE FIBERGLASS JACKET AND EPOXY GROUT PER SPECIAL PROVISIONS "STEEL PILE REPAIR DETAILS".
- THE CONTRACTOR SHALL TAKE STEPS NECESSARY TO PREVENT DEBRIS AND MATERIAL FROM ENTERING THE WATER WHILE CLEANING AND REPAIR PLACEMENT.
- THE CONTRACTOR SHALL SUBMIT FOR APPROVAL THE PROPOSED PILE JACKET SYSTEM. STANDOFF SPACERS SHALL BE PROVIDED TO ENSURE THE JACKET FORM IS CENTERED ON THE EXISTING PILES.
- SPECIFIED PILE JACKET DATA IS BASED ON CORROSION LOCATIONS. GREATER HEIGHTS MAY BE REQUIRED BASED ON HIGH WATER LEVEL.
- CONTRACTOR SHALL COVER CORROSION HOLES IN PILE PRIOR TO JACKET INSTALLATION. SIZE AND LOCATION OF KNOWN HOLES ARE PROVIDED IN THE ATTACHED INSPECTION INFORMATION ON SHEET PD03.01.



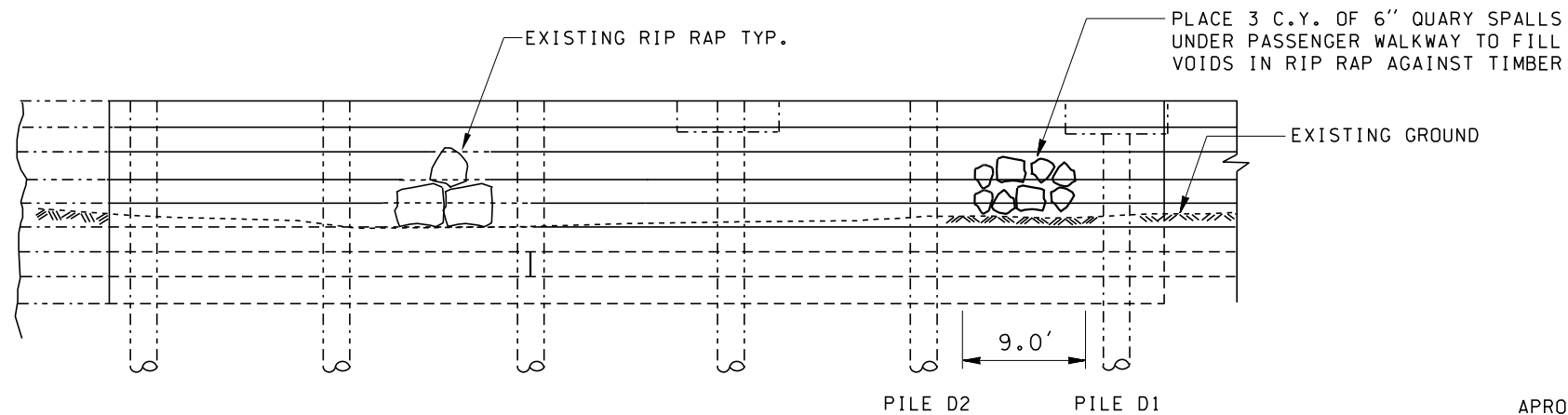
STEEL WINGWALL PILE REPAIR DETAIL



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SR160/SR163-POINT DEFIANCE /TAHLEQUAH FERRY TERMINALS- TRESTLE/WINGWALL PRESERVATION	PD03.02
	SHEET 14 OF 23 SHEETS
POINT DEFIANCE WINGWALL STEEL PILE REPAIR DETAILS	

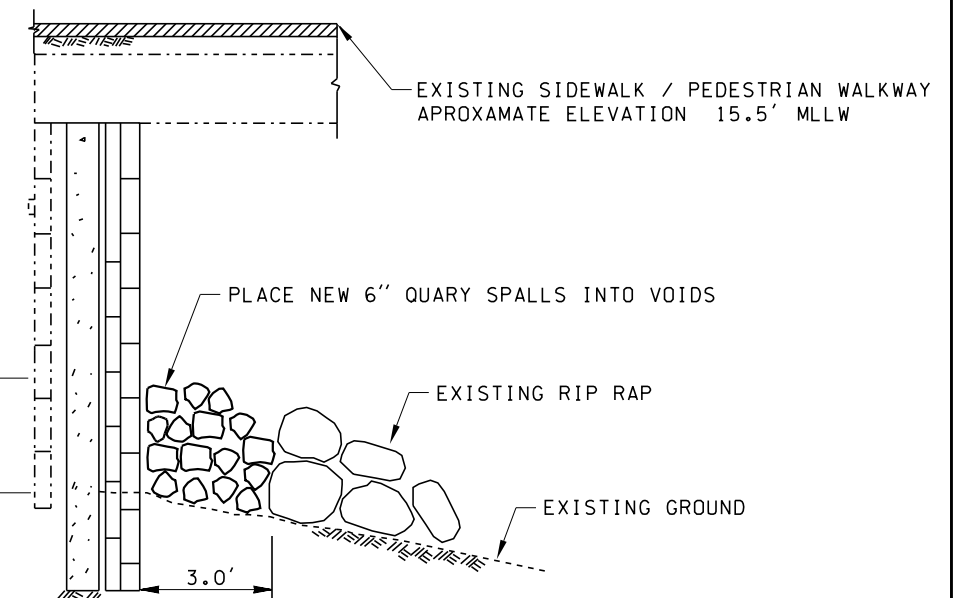


APROXAMATE
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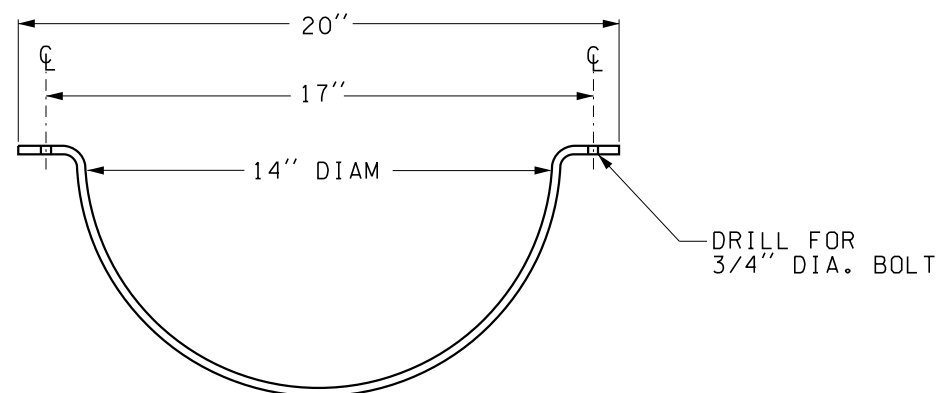
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BULKHEAD REPAIR

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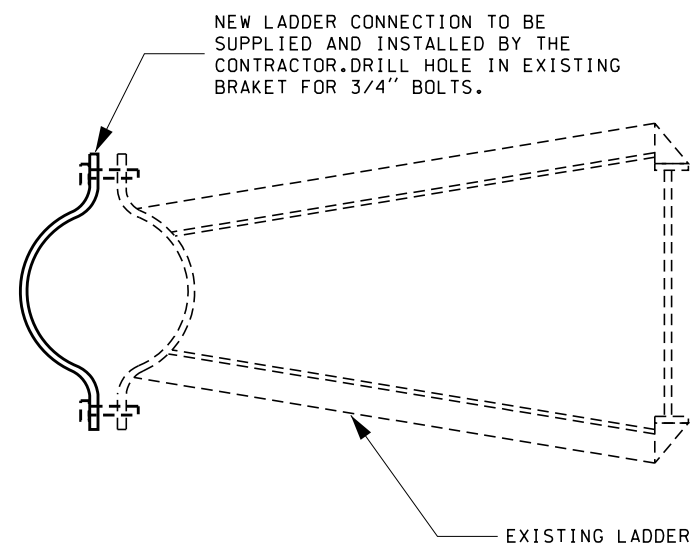


1/4" x 3" HOT DIP GALVINIZED STEEL BAR



SAFETY LADER REPAIR DETAIL

FABRICATE AND INSTALL LADDER CONNECTION TWO PLACES.
ONE AT POINT DEFIANCE AND ONE AT TAHLEQUAH.
SEE SHEETS PD02.02 AND T02.01



SAFETY LADDER REPAIR

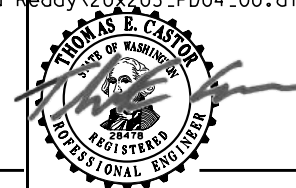
NOT TO SCALE



NOTE

1. THE TIMBER TRESTLE SHALL BE PROTECTED BY THE CONTRACTOR FROM DAMAGE DURING PLACEMENT OF QUARY SPALLS

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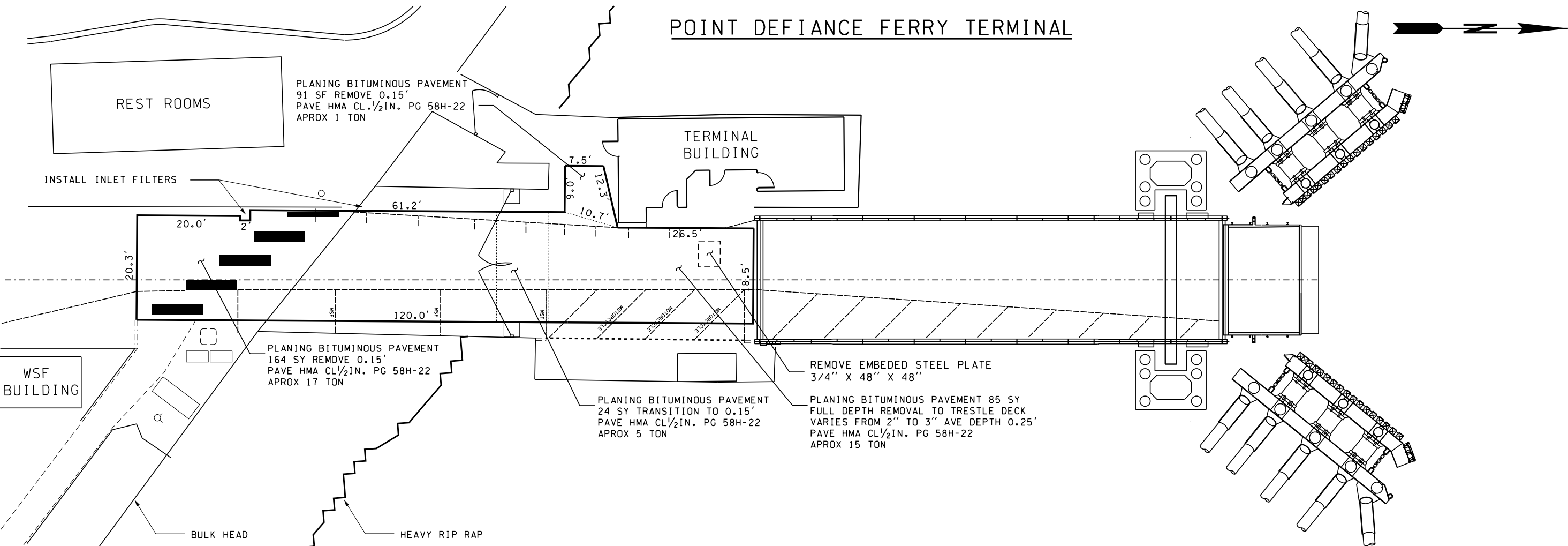
SR160/SR163-POINT DEFIANCE
/TAHLEQUAH FERRY TERMINALS-
TRESTLE/WINGWALL PRESERVATION

POINT DEFIANCE BULKHEAD
AND LADDER REPAIR DETAILS

PD04.00

SHEET
15
OF
23
SHEETS

POINT DEFIANCE FERRY TERMINAL



NOTES:

1. INSTALL INLET PROTECTION ON CATCH BASINS AND TRENCH DRAINS TO PREVENT DEBRIS FROM ENTERING WATERS OF THE STATE.
2. DO NOT OPERATE ROLLER IN VIBRATORY MODE ON TIMBER TRESTLE.
3. PLACEMENT OF HMA SHALL MATCH EXISTING ELEVATIONS AND SLOPE TOWARD EXISTING TRENCH DRAINS.
4. PLANING BITUMINOUS PAVEMENT REQUIRES VARYING DEPTHS. 0.35' IS THE AVERAGE DEPTH FOR FULL DEPTH REMOVAL TO WOOD DECK SURFACE. CARE MUST BE TAKEN TO NOT GRIND INTO WOOD DECK SURFACE. DEPTH TRANSITIONS TO 0.15 TO MATCH A RECENT HMA INLAY.

5. TRESTLE PAVING EQUIPMENT WEIGHT CRITERIA:

THE FOLLOWING PROVIDES MAXIMUM WEIGHT CRITERIA FOR THE PAVING EQUIPMENT ANY PROPOSED EQUIPMENT THAT EXCEEDS THESE LOADS SHOULD BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

REMOVAL EQUIPMENT:

EXCAVATOR ON CRAWLERS - 40,000 LBS
PLANER ON WHEELS - 52,000 LBS
PLANER ON CRAWLERS - 63,000 LBS

DUMP TRUCK (LOADED) - 54,000 LBS

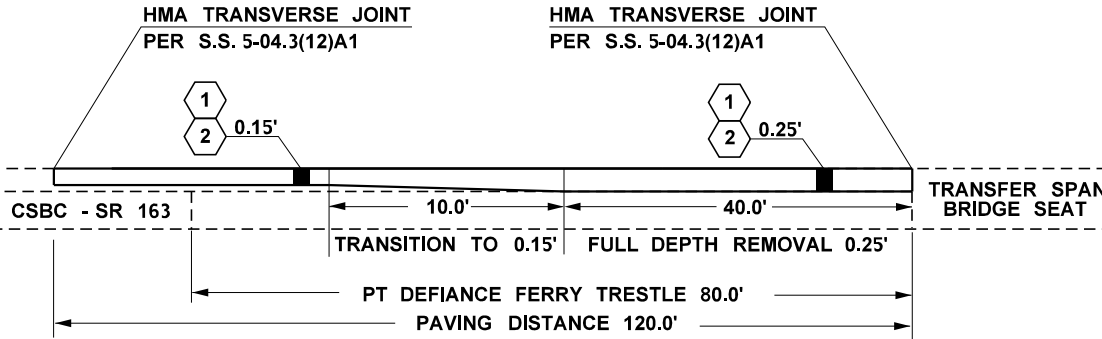
PAVING EQUIPMENT ROLLER - 29,000 LBS FOR SINGLE ROLLER AXLE (58,000 LBS FULL ROLLER WEIGHT)

NOTES:

1. ALL DEPTHS SHOWN ARE COMPACTED DEPTHS.
2. ALL DIMENSIONS IN DECIMAL FEET UNLESS OTHERWISE NOTED.

LEGEND

- 1 PLANING BITUMINOUS PAVEMENT
2 HMA CL 1/2 IN. PG 58H-22



PLANING BITIMINOUS PAVEMENT
AND PAVING DETAIL

NOT TO SCALE

FILE NAME: \\WSDOT.Ioc\WSF\Data\TermEng\Proj\SW\20X203 PD-TA-VA Trestle Repairs\PE\PE_PD\AD\ContractPlans\Ad Ready\20x203_PD05.00.dlv							
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CHECKED BY: J. STRINGFIELD	5/26/2023					JOB NUMBER	
MAR PROJ ENGR: T. CASTOR	5/26/2023					20X203	
DGN ENGR MNGR: C. CHEN						CONTRACT NO.	
ASST SECRETARY: P. RUBSTELLO							
	REVISION	DATE	BY				

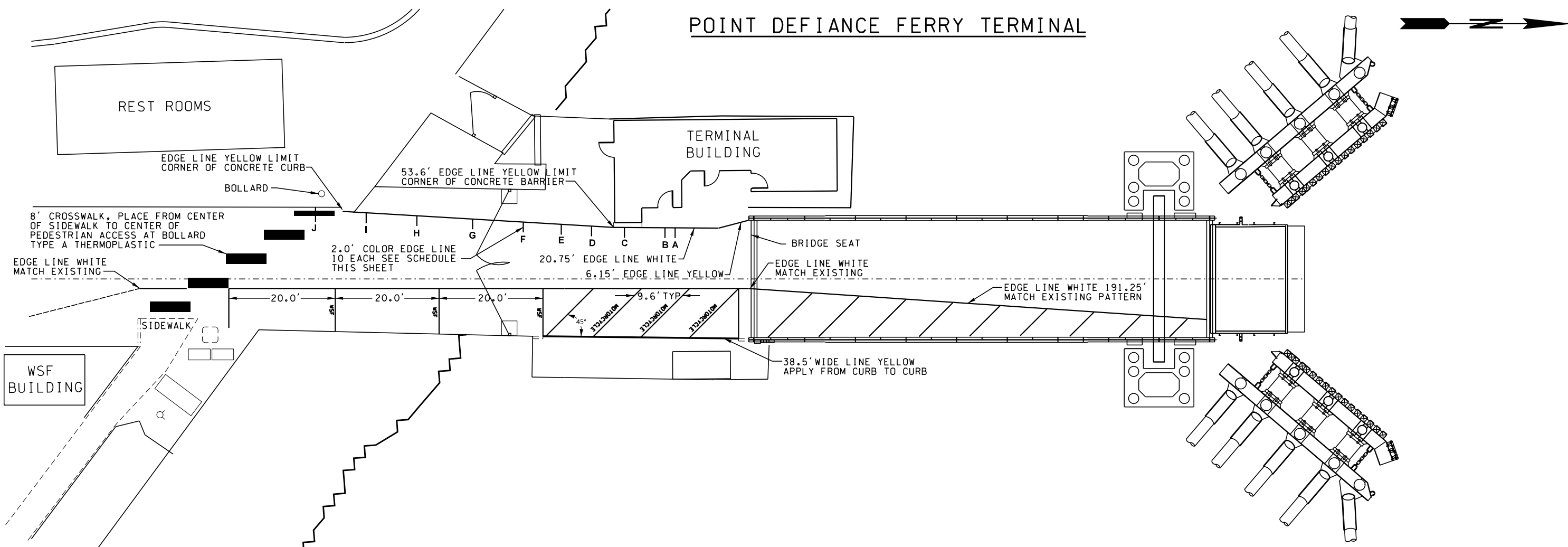


SR160/SR163-POINT DEFIANCE
/TAHLEQUAH FERRY TERMINALS-
TRESTLE/WINGWALL PRESERVATION

POINT DEFIANCE PAVING PLAN

PD05.00
SHEET
16
OF
23
SHEETS

POINT DEFIANCE FERRY TERMINAL



COLOR EDGE LINE SCHEDULE

EDGE LINE DISTANCE FROM BRIDGE SEAT		
TYPE A THERMOPLASTIC		
LINE	DISTANCE	COLOR
A	15.0'	WHITE
B	17.0'	GREEN
C	25.0'	BLUE
D	31.5'	GREEN
E	37.5'	WHITE
F	45.0'	WHITE
G	55.0'	WHITE
H	66.0'	WHITE
I	76.0'	WHITE
J	86.0'	WHITE

LEGEND

- EDGE LINE WHITE, STD PLAN M-20.10
- EDGE LINE WHITE-BLUE, STD PLAN M-20.10
- EDGE LINE WHITE-GREEN, STD PLAN M-20.10
- EDGE LINE YELLOW, STD PLAN M-20.10
- WIDE LINE YELLOW, STD PLAN M-20.10
- CROSSWALK, STD PLAN M-15.10
- MOTORCYCLE 8" LETTERS USE STENCLE CAPITOL LETTERS

SEE STANDARD SPECIFICATION 8-22 PAVEMENT MARKING

NOTES

- ALL DIMENSIONS ARE IN DECIMAL FEET.
- EDGE LINE YELLOW AND WHITE SHALL BE PAINT PER S.S. 8-22.
- BLUE, GREEN, WHITE EDGE LINE WHITE SHALL BE TYPE A THERMOPLASTIC PER S.S. 8-22.
- CROSSWALK SHALL BE TYPE A THERMOPLASTIC.

0 10 20
SCALE 1" = 20'

FILE NAME: \\WSDOT.Ioc\WSF\Data\TermEng\Proj\SW\20X203 PD-TA-VA Trestle Repairs\PE\PE_PD\AD\ContractPlans\Ad Ready\20x203_PD05_01.dwg

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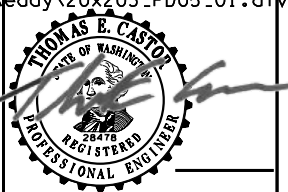
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5/26/2023
5/26/2023
5/26/2023
5/26/2023

REVISION

DATE

BY

FED.AID PROJ.NO.
*- WA - **
REGION NO. STATE
10 WASH
JOB NUMBER
20X203
CONTRACT NO.



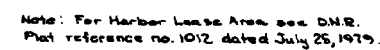
SR160/SR163-POINT DEFIANCE /TAHLEQUAH FERRY TERMINALS-TRESTLE/WINGWALL PRESERVATION

POINT DEFIANCE PAVEMENT MARKING PLAN

PD05.01

SHEET
17
OF
23
SHEETS

MISSION NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.
10	WASH.		



SCALE IN FEET

Authority	Date	Subsequent Approval	
Letter 7-9-81	9-20-81	Added part and right in: Added parcels I-14033, I-14042, and I-14043	
Letter 8-22-84	9-2-84	Revised R/W as outlined parcels I-14042 and I-14035; Revised boundary Park and Ride Lot; Revised boundary and acreage parcel I-14033; Revised acreage parcel I-14043	
Letter 12-14-84	12-21-84	Revised Southeast boundary and added portion boundary; Noted amendment to be reviewed	

I-M035	DANNER, C.D.	60,605 SF.	6,806 SF.	53,797 SF.		
I-M043	SHAHAN, P.A.	254,600 SF.	1,446 SF.	253,154 SF.		
I-M042	SMITH, N.A. WILSON, J.T.	63,340 SF.	20,886 SF.	42,454 SF.		
PARCEL NO.	NAME	TOTAL AREA	R/W	L.T. REMAINDER RT.	EASMT	

OWNERSHIPS

**KING COUNTY
SUNDRY SITE PLANS**

TAHLEQUAH FERRY TERMINAL

WASHINGTON STATE DEPARTMENT OF TRANSPORTATION

OLYMPIA, WASHINGTON

DUANE RESOLUTION

SECRETARY



PROJECT DEVELOPMENT
ENGINEER

APPROVED OCTOBER 19, 1981
S-107 20

FILE NAME: \\WSDOT.lac\WSF\Data\TermEng\Proj\SW\20X203 PD-TA-VA Trestle Repairs\PE\PE_PDX\AD\ContractPlans\Ad Ready\20x203.T01.00.dwg									
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MAR PROJ ENGR: T. CASTOR		5/26/2023				JOB NUMBER 20X203			
DGN ENGR MNGR: C. CHEN						CONTRACT NO.			
ASST SECRETARY: P. RUBSTELLO				REVISION		DATE		BY XE -	



**Washington State
Department of Transportation**
WASHINGTON STATE FERRIES

SR160/SR163-POINT DEFIANCE
/TAHLEQUAH FERRY TERMINALS-
TRESTLE/WINGWALL PRESERVATION

TAHLEQUAH SUNDRY SITE PLAN

T01.00

SHEET
18
OF
23
SHEETS

NOTES

- 1. CONSTRUCTION SIGNS SHALL BE INCLUDED FOR PLANING AND PAVING WORK. SIGNS SHALL BE PLACED ON TRIPOD WITH 25LB WEIGHT
- 2. CONSTRUCTION ACTIVITIES SHALL NOT INTERFERE WITH FERRY TRAFFIC. FERRY SCHEDULES ARE AVAILABLE AND PUBLICIZED.
- 3. CONTRACTOR STAGING AREA IS PROVIDED AS SHOWN. CONTRACTOR STAGING AREA MAY BE ADJUSTED WITH PERMISSION FROM THE ENGINEER.
- 4. THE CONTRACTOR SHALL FOLLOW ALL NOISE ORDINANCES FOR KING COUNTY. THE CONTRACTOR IS RESPONSIBLE FOR ANY PERMITS THAT MAY BE REQUIRED.
- 5. THERE IS NO POTABLE WATER AT THIS LOCATION.



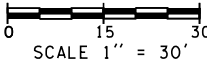
CONSTRUCTION WARNING SIGNS SHALL BE PLACED ON VASHON HIGHWAY APPROACHING THE TERMINAL.

CONSTRUCTION WARNING SIGNS SHALL BE PLACED ON TAHLEQUAH TRANSFER SPAN RIGHT SIDE.

TAHLEQUAH FERRY TERMINAL

CONSTRUCTION STAGING AREA

TAHLEQUAH PARK AND RIDE LOT



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ASST SECRETARY: P. RUBSTELLO							
	REVISION	DATE	BY				



SR160/SR163-POINT DEFIANCE /TAHLEQUAH FERRY TERMINALS-TRESTLE/WINGWALL PRESERVATION

TAHLEQUAH CONSTRUCTION STAGING PLAN

T02.00

SHEET 19 OF 23 SHEETS

TAHLEQUAH FERRY TERMINAL

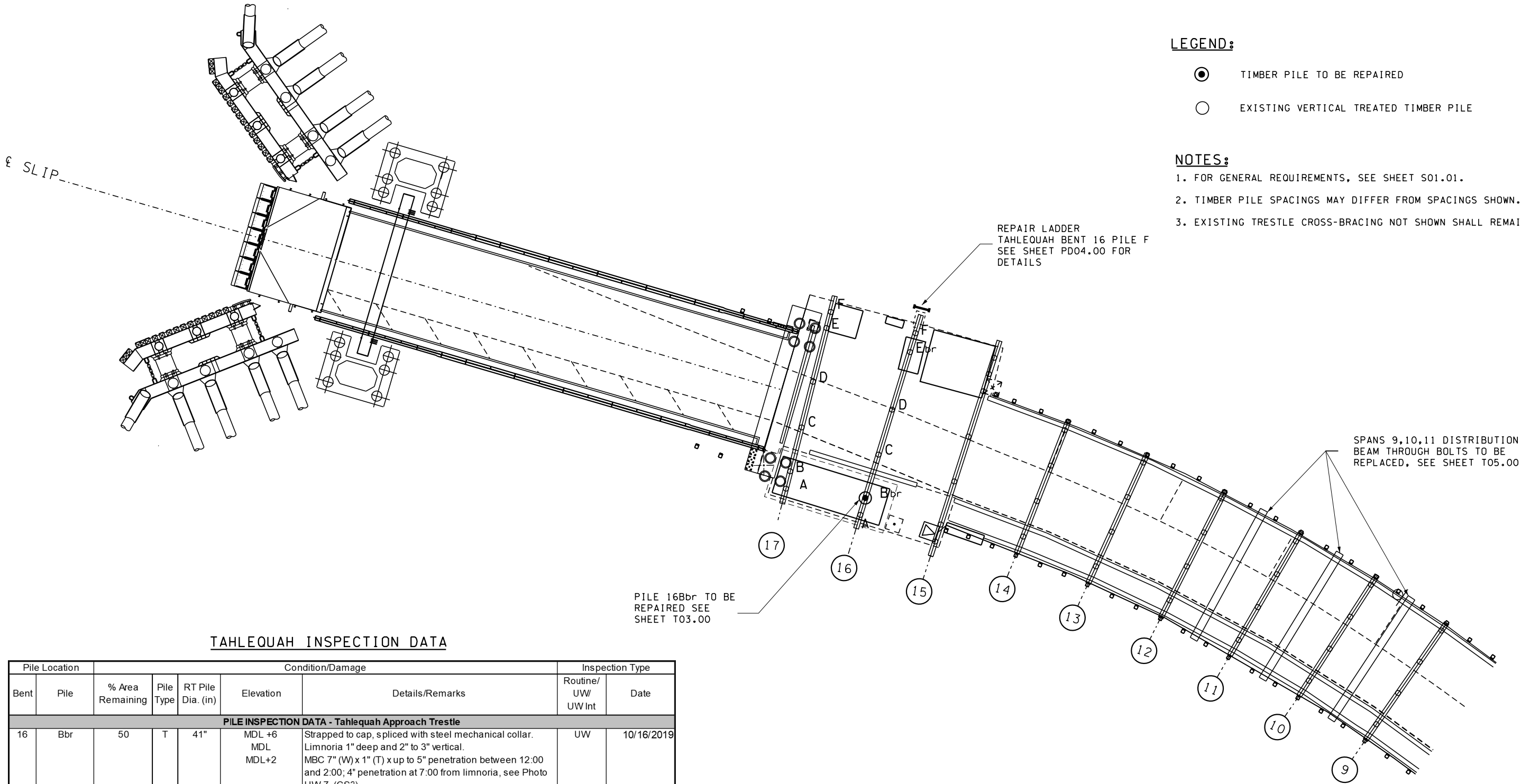


LEGEND:

- TIMBER PILE TO BE REPAIRED
- EXISTING VERTICAL TREATED TIMBER PILE

NOTES:

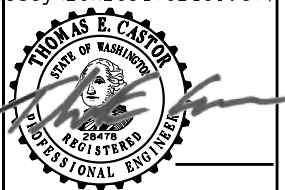
- FOR GENERAL REQUIREMENTS, SEE SHEET S01.01.
- TIMBER PILE SPACINGS MAY DIFFER FROM SPACINGS SHOWN.
- EXISTING TRESTLE CROSS-BRACING NOT SHOWN SHALL REMAIN



TAHLEQUAH INSPECTION DATA

Pile Location		Condition/Damage					Inspection Type	
Bent	Pile	% Area Remaining	Pile Type	RT Pile Dia. (in)	Elevation	Details/Remarks	Routine/ UW/ UW Int	Date
PILE INSPECTION DATA - Tahlequah Approach Trestle								
16	Bbr	50	T	41"	MDL +6 MDL MDL+2	Strapped to cap, spliced with steel mechanical collar. Limnoria 1" deep and 2" to 3" vertical. MBC 7" (W) x 1" (T) x up to 5" penetration between 12:00 and 2:00; 4" penetration at 7:00 from limnoria, see Photo UW-7. (CS3)	UW	10/16/2019

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ENTERED BY: T. SMITH		5/26/2023		JOB NUMBER		20X203			
CHECKED BY: J. STRINGFIELD		5/26/2023		CONTRACT NO.					
MAR PROJ ENGR: T. CASTOR		5/26/2023							
DGN ENGR MNGR: C. CHEN									
ASST SECRETARY: P. RUBSTELLO									
		REVISION		DATE		BY XE-			



SR160/SR163-POINT DEFIANCE /TAHLEQUAH FERRY TERMINALS-TRESTLE/WINGWALL PRESERVATION		T02.01
TAHLEQUAH TRESTLE PILE LAYOUT		SHEET 20 OF 23 SHEETS



NOTES:

1. INSTALL INLET PROTECTION ON CATCH BASINS TO PREVENT DEBRIS FROM ENTERING WATERS OF THE STATE.
2. DO NOT OPERATE ROLLER IN VIBRATORY MODE ON TIMBER TRESTLE.
3. PLACEMENT OF HMA SHALL MATCH EXISTING ELEVATIONS AND SLOPE TOWARD EXISTING CATCH BASINS.
4. PLANING BITUMINOUS PAVEMENT REQUIRES FULL DEPTH REMOVAL TO WOOD DECK SURFACE. PLANING DEPTH OF 0.30 IS AN AVERAGE DEPTH. CARE MUST BE TAKEN TO NOT GRIND INTO WOOD DECK SURFACE.

5. TRESTLE PAVING EQUIPMENT WEIGHT CRITERIA:

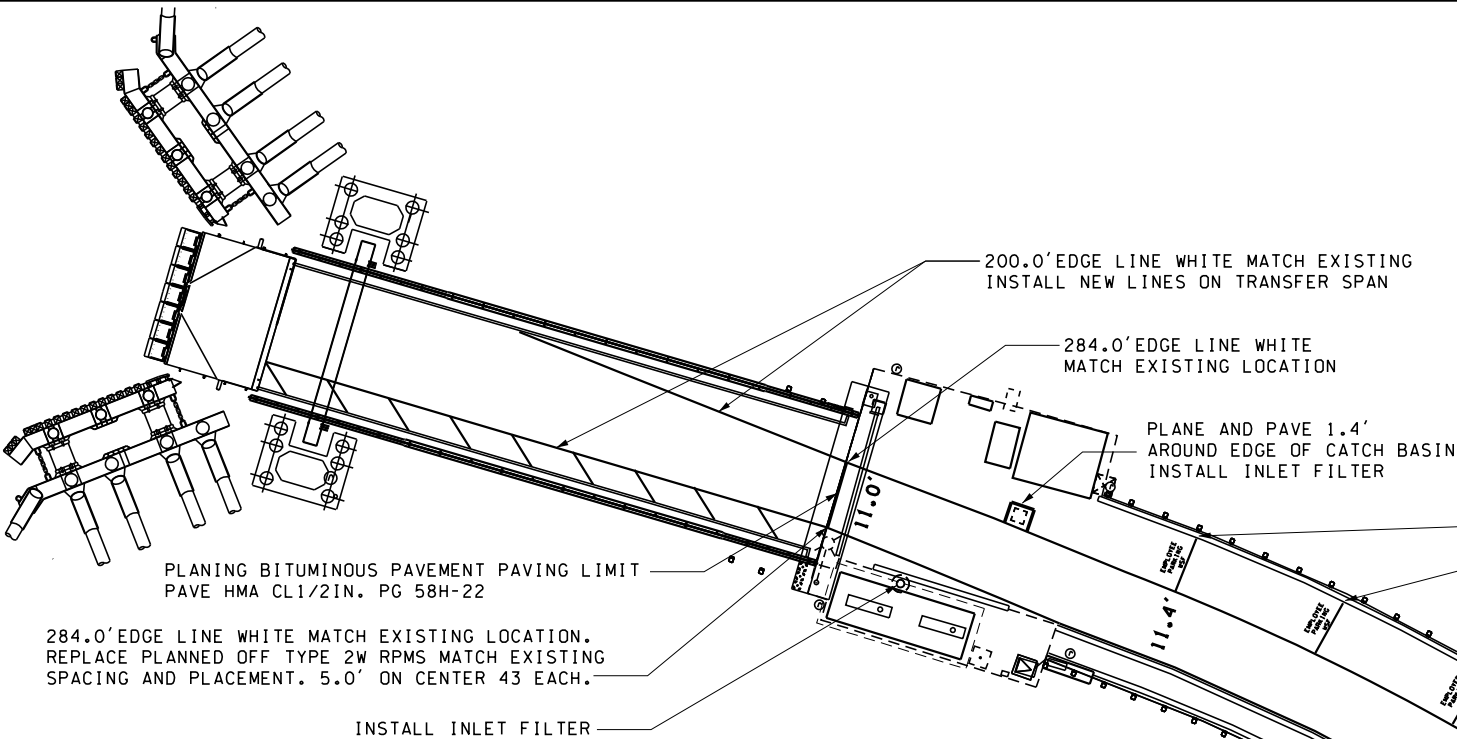
THE FOLLOWING PROVIDES MAXIMUM WEIGHT CRITERIA FOR THE PAVING EQUIPMENT ANY PROPOSED EQUIPMENT THAT EXCEEDS THESE LOADS SHOULD BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

REMOVAL EQUIPMENT:

EXCAVATOR ON CRAWLERS - 38,000 LBS
PLANER ON WHEELS - 49,000 LBS
PLANER ON CRAWLERS - 54,000 LBS

DUMP TRUCK (LOADED) - 45,000 LBS

PAVING EQUIPMENT - 23,500 LBS FOR SINGLE ROLLER
ROLLER - 47,000 LBS FULL ROLLER WEIGHT)

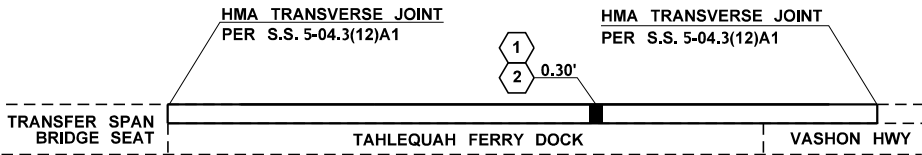


NOTES:

1. ALL DEPTHS SHOWN ARE COMPACTED DEPTHS.
2. ALL DIMENSIONS IN DECIMAL FEET UNLESS OTHERWISE NOTED.
3. PLANE TO TOP OF WOOD TRESTLE.

LEGEND

- 1 PLANING BITUMINOUS PAVEMENT
- 2 HMA CL 1/2 IN. PG 58H-22

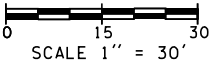


PLANING BITIMINOUS PAVEMENT AND PAVING DETAIL

NOT TO SCALE

LEGEND

- DETECTABLE WARNING SURFACE (DIRECTIONAL) SEE S.S. 8-14.3.
- EDGE LINE WHITE, STD PLAN M-20.10
- PARKING FOR 8" LETTERS USE STENCLE AND CAPITOL LETTERS.
- SEE STANDARD SPECIFICATION 8-22 PAVEMENT MARKING

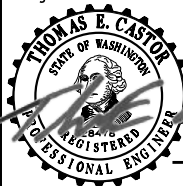


- END EDGE LINE WHITE LIMIT MATCH EXISTING LOCATION
- REPLACE PLANED OFF DETECTABLE WARNING SURFACE. MATCH EXISTING LOCATIONS.
- END EDGE LINE WHITE LIMIT MATCH EXISTING LOCATION

50.0' EDGE LINE WHITE REPAINT PATTERN MATCH EXISTING

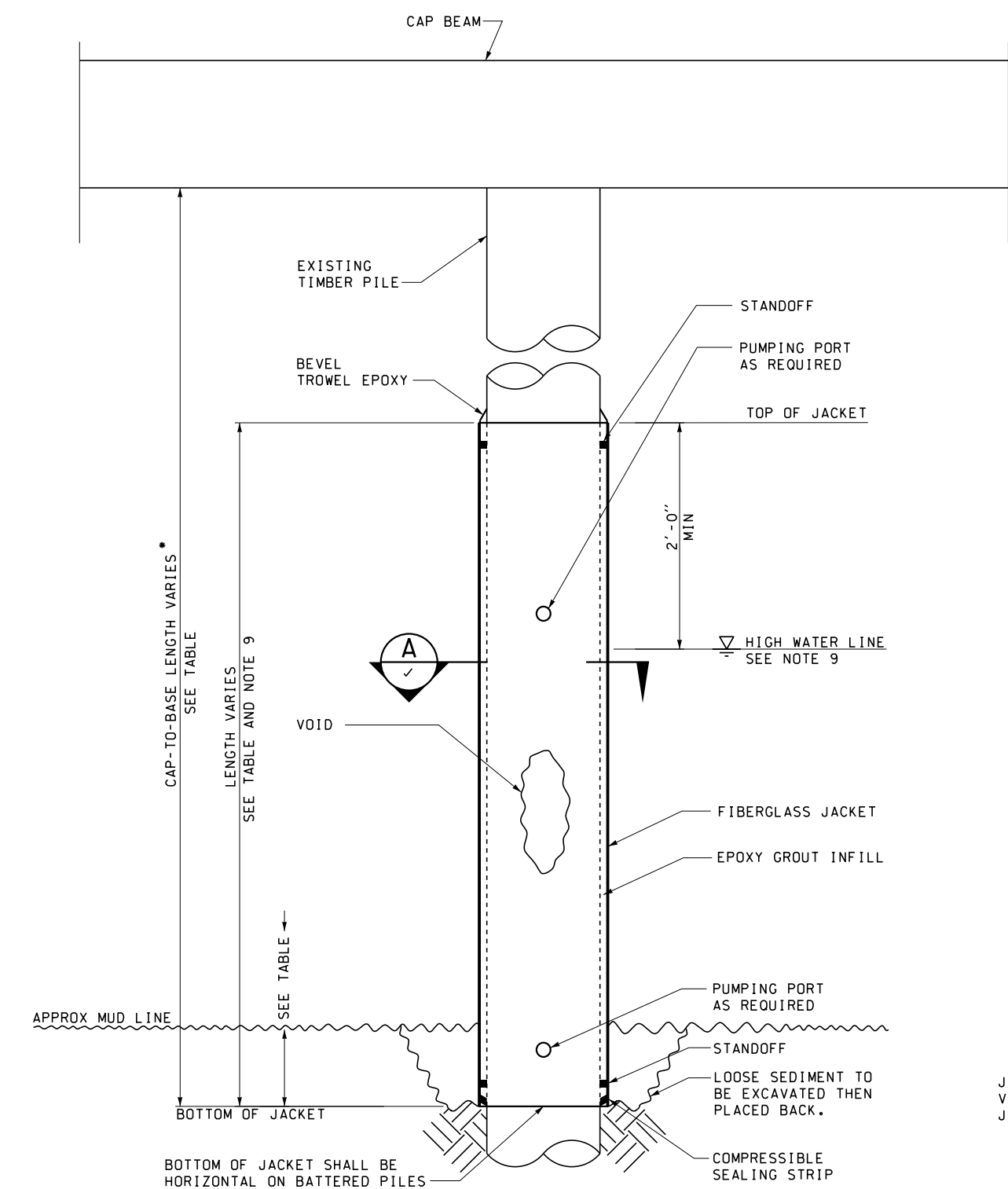
PLANING BITUMINOUS PAVEMENT PAVING LIMIT MATCH EXISTING SEEM PAVE HMA CL 1/2 IN. PG 58H-22

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	REVISION	DATE	BY						



SR160/SR163-POINT DEFIANCE /TAHLEQUAH FERRY TERMINALS-TRESTLE/WINGWALL PRESERVATION
TAHLEQUAH PAVING/PAVEMENT MARKING PLAN

T02.02
SHEET
21
OF
23
SHEETS

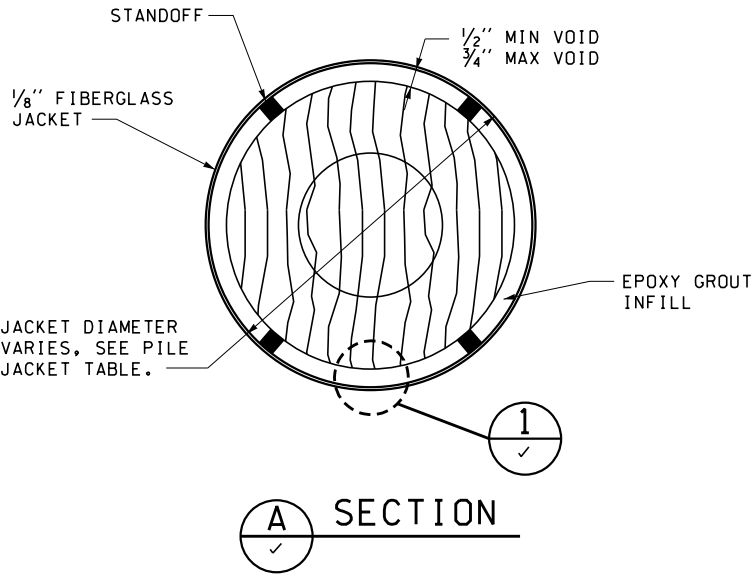


TIMBER PILE REPAIR DETAIL

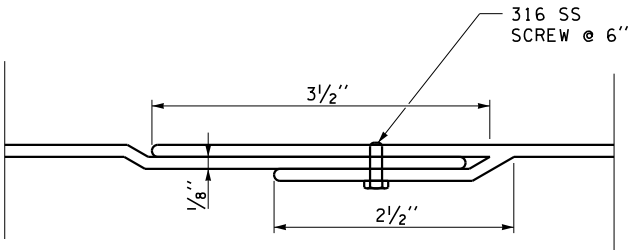
* LENGTH REFERS TO BOTTOM OF MAIN CAP OR SUB-CAP WHERE APPLICABLE. LENGTH REFERS TO VERTICAL DIMENSIONS ON ALL BATTERED PILES.

PILE JACKET TABLE					
PILE DESIGNATION	MUDLINE DIAMETER* (IN)	CAP-TO-MDL LENGTH (FT)	BOTTOM OF JACKET	TOP OF JACKET	MDL ELEV. (FT)
TAHLEQUAH					
16Bbr	13.1	??	MDL - 1'	MDL + 10'	??

* PILE DIAMETER IS APPROXIMATE AND SHOULD BE FIELD VERIFIED BY CONTRACTOR.



A SECTION

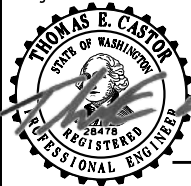


1 DETAIL

NOTES:

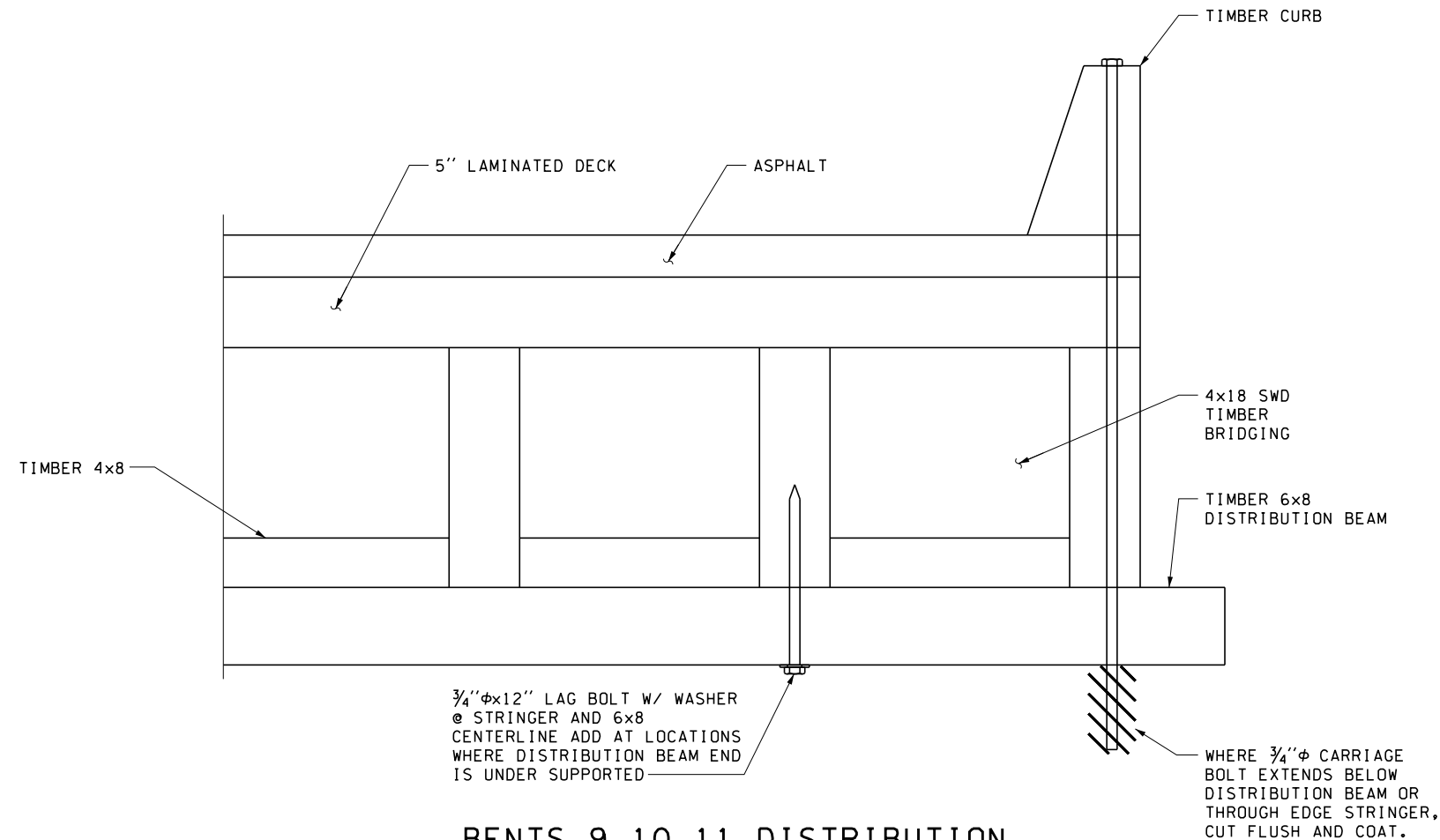
- FOR GENERAL REQUIREMENTS, SEE S01 DRAWING SERIES. FOR FIELD TREATMENT OF CUT SURFACES, SPIKE AND BOLT HOLES, AND CONTACT SURFACES, SEE S01.01 AND S01.02.
- FOR ADDITIONAL REQUIREMENTS, SEE SPECIAL PROVISION "TIMBER PILE REPAIR".
- FOR LOCATIONS OF TIMBER PILES TO BE REPAIRED, SEE TRESTLE PILE LAYOUT SHEETS.
- WHERE GROUND LINE SLOPES, EXCAVATION SHALL BE MEASURED FROM THE LOWEST ADJACENT GROUND LINE.
- THE CONTRACTOR SHALL CLEAN AND TREAT THE SURFACE OF THE EXISTING TIMBER PILE PRIOR TO THE INSTALLATION OF THE FIBERGLASS JACKET AND EPOXY GROUT PER SPECIAL PROVISIONS.
- THE CONTRACTOR SHALL TAKE STEPS NECESSARY TO PREVENT DEBRIS AND MATERIAL FROM ENTERING THE WATER WHILE CLEANING AND REPAIR PLACEMENT.
- THE CONTRACTOR SHALL SUBMIT FOR APPROVAL THE PROPOSED PILE JACKET SYSTEM. STANDOFF SPACERS SHALL BE PROVIDED TO ENSURE THE JACKET FORM IS CENTERED ON THE EXISTING PILES.
- ALL STEEL THREADED RODS, FASTENERS AND CONNECTIONS SHALL BE HOT-DIPPED GALVANIZED PER AASHTO M232.
- SPECIFIED PILE JACKET DETAILS BASED ON ROT LOCATIONS. GREATER HEIGHTS MAY BE ALLOWED BASED ON HIGH WATER LEVEL.
- TRANSVERSE CROSS-BRACING AND RIP-RAP NOT SHOWN FOR CLARITY.
- ADDITIONAL EXCAVATION MAY BE REQUIRED TO ACCOUNT FOR SEALING STRIP INSTALLATION.

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		REVISION	DATE	BY					



SR160/SR163-POINT DEFIANCE /TAHLEQUAH FERRY TERMINALS-TRESTLE/WINGWALL PRESERVATION
TAHLEQUAH TIMBER TRESTLE PILE REPAIR DETAILS

T03.00
SHEET
22
OF
23
SHEETS



**BENTS 9,10,11 DISTRIBUTION
BEAM REPAIR DETAILS**

LOOKING OFFSHORE ON RIGHT SIDE OF TRESTLE

FILE NAME: \\WSDOT.1oc\WSF\Data\TermEng\Proj\SW\20X203 PD-TA-VA Trestle Repairs\PE\PE_PD\AD\ContractPlans\Ad Ready\20x203-T05-00.dlv										<div>SR160/SR163-POINT DEFIANCE /TAHLEQUAH FERRY TERMINALS- TRESTLE/WINGWALL PRESERVATION</div> <div>TAHLEQUAH DISTRIBUTION BEAM REPAIR DETAILS</div>		T05.00				
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SUBMITTAL DATE: 5/26/2023	DESIGNED BY: T. SMITH	5/26/2023								SHEET 23 OF 23 SHEETS						
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